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Wayne [US/US]; 1240 Cole Street, San Francisco, CA 94117 (US).

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(74) Agents: **HALL, David, A.** et al.; Heller Ehrman White & McAuliffe, Suite 700, 4250 Executive Square, La Jolla, CA 92037 (US).

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(71) Applicant (*for all designated States except US*): **BULA BAY CORP.** [US/US]; Suite 300, 2999 Oak Road, Walnut Creek, CA 94596 (US).

(72) Inventor; and

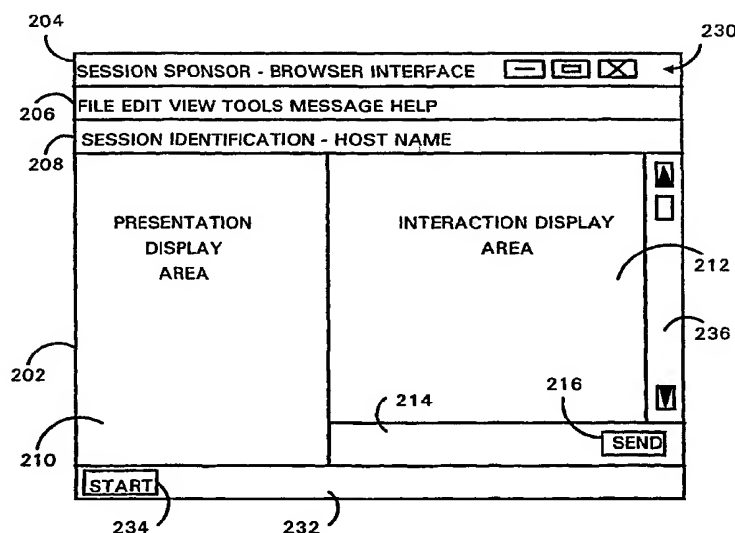
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(75) Inventor/Applicant (*for US only*): **FARMER, Alfred,**

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(54) Title: INTERACTIVE NETWORK PRESENTATION SESSION MANAGEMENT



(57) Abstract: A technique for efficient on-line interaction between a group host and group guests, such that the group host has control over information presented to the entire group and has control over the composition of the group. The group host initiates an interactive presentation session that the other network users may join and, during the session, the host may determine the information to be presented in the information display area and may manage the users who are permitted to participate in the session. The users may exchange messages in the interaction area in response to information in the presentation area. The information in the presentation area can concern products available for purchase, or classroom material to be learned, or the like. The interaction area may be the site where products are discussed and purchases are arranged, or where student questions or examinations are answered.



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INTERACTIVE NETWORK PRESENTATION SESSION MANAGEMENTTECHNICAL FIELD

This invention relates generally to information processing systems and, more particularly, to interactive network communications for sharing of information among multiple computer users.

5 BACKGROUND ART

Computer networks are especially suited to facilitating communications and bringing together large groups of people. Communications via e-mail, for example, have become quite ubiquitous and among many population segments have supplanted the telephone and printed paper copies as the preferred mode of communication. In particular, the computer network known as the Internet has facilitated group communications. Internet telephony, video, and chat services facilitate interactive, simultaneous communication among groups.

Computer communications are a relatively recent phenomenon. A variety of situations are traditionally experienced only in the context of a live, in-person group meeting. For example, there are selling activities in which a group of persons come together to view and purchase merchandise presented by a salesperson. For example, in the U.S.A., such situations may be illustrated by the well-known selling format traditionally used to sell "Tupperware" brand food storage and kitchen products and the "Avon" line of cosmetics and household products. These products are usually sold in a group situation where a person hosts a sales presentation and shows a selection of products. At the sales presentation, guests will view the products presented by the host and will place orders. The interaction between hosts and guests puts the host in a leadership role to guide the sales presentation so as to emphasize product advantages and features, generate excitement and encourage discussion about the products, take orders, and facilitate sales. Successful hosts are highly sought after, usually are compensated based on the sales they generate, and can receive significant incentives to host sales presentations and increase sales.

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Another situation typically experienced in a group meeting context is the classroom instruction session. An instructor or teacher acts as the group leader and presents information to the guests or students in the group, who may ask questions of the leader and thereby learn the information being presented. The leader guides the classroom presentation and discussion to achieve predetermined learning objectives and tests student understanding of the material presented in the classroom. It is generally believed that the group interaction between the classroom leader and students, and among the students themselves under the leader's guidance, facilitates the exchange of information and makes the classroom presentation a more effective learning environment.

It would be advantageous if these traditionally in-person, group interactive situations could take advantage of the widespread access, efficiency, and immediacy afforded by computer networks such as the Internet to bring together groups of people and creatively disseminate information to them. Unfortunately, presently available computer systems are not oriented to permit such leader-to-group interaction and exchanges of information. Most e-mail systems are efficient at one-to-many information distribution, but do not facilitate true "live" interaction among users. The so-called "Internet Relay Chat" provides chat sessions that support on-line group interaction, but most chat systems provide an environment that is too unstructured for the situations described above. Existing Internet auction services and similar e-commerce solutions do not support interaction such as encouraged by the hosted sales presentation "Tupperware" and "Avon" examples described above. Such conventional e-commerce solutions typically segregate messages received from client users and messages sent from a central server, so that only the server site issues messages. Thus, such systems are often highly structured and lack the spontaneous interaction provided by the in-person situations. Telephone and video Internet implementations are difficult for the general population to use and cannot provide the sales and product support required for a viable e-commerce solution.

From the discussion above, it should be apparent that there is a need for a group interaction process that is implemented via a computer network so as to encourage exchange of information under the direction and guidance of a host or leader. The present invention fulfills this need.

DISCLOSURE OF INVENTION

The present invention provides a computer information processing system in which network users interactively communicate with each other during a host/leader-directed presentation session in a graphical user interface (GUI) environment. During the presentation session, users can interact through an interaction display area of the GUI and are shown information in a simultaneously shown presentation display area, wherein the presentation information is selected by one of the users, who is designated the group host, or leader. The host initiates an interactive presentation session that the other network users may join and, during the session, the host determines the information to be presented in the GUI display area and determines the users who are permitted to participate in the session. Multiple users can interactively exchange comments in the interaction area in response to information in the presentation display area. The display area information selected by the group host may concern, for example, products available for purchase. The system will receive product selection information from users and will carry out purchase processing for billing and delivery in what is generally referred to as an e-commerce transaction. Other presentation information, such as classroom material to be learned, can be displayed. The system includes mechanisms for designating any one of the users as a host/leader. Thus, the system provides efficient on-line group interaction between a group host/leader and group guests, such that the group host has control over information presented to the entire group and has control over the composition of the group. In this way, the system integrates access to interactive communication, e-commerce, and directed presentation session functions in a single application.

In one aspect of the invention, users decide which presentation session they want to join by consulting a scheduling display of the GUI that lists available interactive presentation sessions that have been or will be initiated by a session host. If desired, access to presentation sessions by users can be made conditional upon password authorization that a user can obtain through the scheduling display. In another aspect of the invention, a control mechanism controls initiation of presentation sessions to those users who have received authorization to do so. Any user may become a group host by

requesting authorization as a session host, commencing at an indicated time. A session host can determine the information to be presented in the GUI presentation display area and can observe a list of participants during a presentation session. If desired, the host can revoke authorization for any session participant, thereby terminating participation by any user during a session. In this way, the host has control over the information presented and the composition of the group.

In another aspect of the invention, the functionality to support the user interaction can be implemented with either network server-side processing or client-side processing, depending on the operating environment in which the users function. For example, the system may be implemented over the Internet. If the functionality is provided through server-side processing, then a properly constructed Internet web site can be accessed by Internet users and the displays may be viewed in a conventional client-side application program, such as a Web browser program. Thus, any Internet user with a web browser can gain access to the system and participate in an on-line interactive e-commerce session, viewing product information and making purchases, and any Internet user is potentially a session guest and a session leader.

Other features and advantages of the present invention should be apparent from the following description of the preferred embodiment, which illustrates, by way of example, the principles of the invention.

## BRIEF DESCRIPTION OF DRAWING

The objects, advantages and features of this invention will be more readily appreciated from the following detailed description, when read in conjunction with the accompanying drawing, in which:

Figure 1 is a block diagram representation of the functional components in a computer information processing system that provides interactive presentation session management in accordance with the present invention.

Figure 2 is an illustration of a display screen produced by the computer processing system illustrated in Figure 1.

Figure 3 is a representation of a computer network system constructed in accordance with the present invention to provide the functional components illustrated in Figure 1.

5 Figure 4 is a block diagram of a computer processing system at a node of the Figure 3 network that implements the presentation session management system in accordance with the present invention.

Figure 5 is an illustration of a Scheduling Module display shown on a computer of the system illustrated in Figure 3.

10 Figure 6 is an illustration of a Community Viewing Module display shown on a computer of the system illustrated in Figure 3.

Figure 7 is an illustration of a Host Control Module display shown on a computer of the system illustrated in Figure 3.

Figure 8 is an illustration of a Host Transaction Module display shown on a computer of the system illustrated in Figure 3.

15 Figure 9 is a flow diagram that illustrates the processing steps executed by the computer processing system of Figure 3 to implement user-controlled interactive network sessions in accordance with the present invention.

Figure 10 is a flow diagram that illustrates the processing steps executed by the computer processing system of Figure 3 to implement the Scheduling Module functions.

20 Figure 11 is a flow diagram that illustrates the processing steps executed by the computer processing system of Figure 3 to implement the Community Viewing Module functions.

25 Figure 12 is a flow diagram that illustrates the processing steps executed by the computer processing system of Figure 3 to implement the Host Transaction Module functions.

Figure 13 is a flow diagram that illustrates the processing steps executed by the computer processing system of Figure 3 to implement the Host Control Module functions.

30 Figure 14 is an illustration of a Presentation Session Management System web site home page shown on a computer of the system illustrated in Figure 3.

Figure 15 is an illustration of a display screen in which the two display areas of Figure 2 are provided in browser sub-windows.

#### BEST MODE FOR CARRYING OUT THE INVENTION

Figure 1 is a representation of the functional components in a computer information processing Presentation Session Management System 100, constructed in accordance with the present invention to provide network users with a graphical user interface (GUI) with which they can interactively communicate with each other through their respective computers in an interaction display area, and can view information in a simultaneously shown presentation display area, wherein the presentation information is selected by a network user who initiates a presentation session and is designated the session host/leader. To communicate with each other, the remaining users join the initiated presentation session. With the GUI of the system 100, multiple network users can interactively communicate with each other in a session such that one of their number is designated the session host and therefore is given power to determine the information being presented and to manage the participants during the presentation session. The system 100 can advantageously support presentations comprising interactive e-commerce sales presentations, instructional delivery, and the like. The GUI of the system may be implemented on the Internet and accessed by using a conventional Internet web browser application, if desired.

Components of the system 100 shown in Figure 1 include a Scheduling Module 102 that network users consult to determine when presentation sessions will occur and to join active presentation sessions, and also to receive authorization to become a group host and initiate an interactive session. That is, a user who is a host initiates an interactive presentation session that other network users may join and, during the session, the host determines the information to be presented in the GUI display area and manages the users who are permitted to participate in the session. The interaction display area and presentation display area are generated through a Community Viewing Module 104. The Community Viewing Module can show, for example, merchandise for sale to users, or instructional material to be viewed for learning. A Host Transaction Module 106 permits a network user who has been authorized to act as a group host (through the



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Scheduling Module) to initiate an on-line interactive presentation session, and thereby control the session participants and the presented information comprising products for sale, data, and the like. Users who want information concerning serving as a session host, and users who have received session host authorization and want to initiate their on-line sessions, do so through a Host Control Module 108. In this way, the components 100 provide a system in which a session host is a network user who can determine the information being presented from the Community Viewing Module and can control the remaining network user participants during a session.

In the preferred embodiment, user interaction with the Presentation Session Management System 100 is through a graphical user interface (GUI) application program, and the system uses communication over a network such as the well-known Internet or otherwise uses the Internet TCP/IP communications protocol. As a result, the modules shown in Figure 1 can be resident at an Internet server location to provide an appropriately constructed Internet web site, and the functional features provided by the modules can be accessed through a conventional web browser program or the like. Thus, users can easily participate in a presentation session in accordance with the invention by directing a web browser program to an appropriate Internet address, or URL (Uniform Resource Locator) corresponding to the system 100 web site. This permits the Presentation Session Management system 100 to support a wide variety of subject matter during a session. For example, one type of application can provide an e-commerce sales environment, such that text, audio, and video information can be provided in the presentation display area to show merchandise available for purchase, and users can interact by exchanging comments in the interaction display area. The interaction display area can provide an interaction similar to what is currently experienced as Internet on-line "chat" rooms, which will be well-known to those skilled in the art.

Figure 2 is a representation of the display window 202 that is presented to a user at a user computer of the preferred embodiment. Interaction with the Presentation Session Management system 100 is preferably through a web browser. Thus, the browser display window 202 contains display window artifacts that will be familiar to those skilled in the art, including a title bar 204 at the top edge of the window and a

menu bar 206 below it. A session identification bar 208 is located below the menu bar and may show a session title, such as a company whose products are being sold or a class that is being taught, and may identify a session host, such as the name of a sales representative or instructor. Below the session identification bar 208 are two display areas for simultaneous display of information, a Presentation Display Area 210 and an Interaction Display Area 212.

Information being presented to users by the session host is shown in the Presentation Display Area 210, and may display video clips, still pictures, audio content, and text. In an e-commerce application, such presentation information may explain and illustrate products that are available for purchase. In a learning application, the information may provide instructional material to be learned. User interaction occurs in the Interaction Display Area 212, in a display format such as currently provided by Internet "chat room" services. Those skilled in the art will understand that chat rooms are "populated" with users who are logged-on to the service and who type comments at their respective network computer stations, and then have those comments appear to all logged-on chat users in a common display area. The interaction area 212 serves such a common display purpose, and will therefore typically have a preview area 214 in which a user may prepare a typewritten comment, to compose and edit it before submitting it for viewing among the group. The preview area will therefore have a SEND display button 216 that initiates transmission of the comment.

Other display window artifacts shown in Figure 2 will be recognized by those skilled in the art. For example, the window 202 includes window sizing icons 230, and a display window program tray 232. The "START" icon 234 provides access to a variety of operating system commands and will be familiar to those skilled in the art. A vertical scrolling bar 236 on the right edge of the window 202 can be used to scroll up and down the browser window. Although the Figure 2 display window shows a configuration typical for an operating system such as "Windows 98" by Microsoft Corporation, it should be understood that the viewer browser program also can be interfaced with other computer operating systems, such as the "Macintosh" operating system by Apple Computer Corporation and the various UNIX operating systems that are available.

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Figure 3 is a representation of a computer system 300 that provides presentation session management in accordance with the present invention. A group of computer users User 1, User 2, . . . , User n (labeled 302, 304, 306, respectively) communicate with an Information Server presentation session computer 308 over a network 310. A "joined user" is a user who is in communication with the server 308 through the GUI of the system. The network may comprise a local area network (LAN), an intranet, the Internet, or a combination of all three.

In the preferred embodiment, the network 310 comprises the popular and well-known Internet and the presentation session management software (Figure 1) is implemented in the Information Server 308, so that both the information presented and the interaction with fellow users will occur through the Information Server. That is, a user will go through the Information Server to establish (if a host) or gain entrance to an on-line presentation session, and will communicate with other users through the Information Server. Purchase selections from users, payment information, and the like will be received by the server 308 from the users 302, 304, 306 and will be processed for payment and delivery in an e-commerce transaction. As described further below, one of the users 302, 304, 306 will be designated a session host, and will have authority to select products or information being displayed, and to ban users from participation.

In the preferred embodiment, the Presentation Session Management functionality is provided by a computer program that is installed in a computer 308 separate from the user computer 302, 304, 306, and a user can communicate with the presentation session computer 308 from any computer connected via the network 310. It should be understood, however, that the user computer and Presentation Session Management function can be provided in the same computer, if desired. In that construction, the computer of a user computer who participates in the presentation session management technique described herein would include the Figure 1 components. In the preferred embodiment, all or part of the information provided by the Presentation Session Management system may be stored at one or more computers communicating with the network 310, including a user computer and the Information Server computer 308. Such information includes, for example, audio, video, and text data concerning available

products, cost and shipping arrangements, user accounts, shopping baskets, and other data associated with an e-commerce web site.

### Computer Construction

Those skilled in the art will appreciate that the Presentation Session Management computer from which information is produced may comprise multiple Internet file server computers storing Web site files. Those skilled in the art also will appreciate that the user computers 302, 304, 306, and the Information Server computer 308 can all have a similar computer construction.

Figure 4 is a block diagram of an exemplary computer 400 such as might comprise any of the computers 302, 304, 306, 308. Each computer 400 operates under control of a central processor unit (CPU) 402, such as a "Pentium" microprocessor and associated integrated circuit chips, available from Intel Corporation of Santa Clara, California, USA. A computer user can input commands and data from a keyboard 404 and can view inputs and computer output at a display 406. The display is typically a video monitor or flat panel display. The computer 400 also includes a direct access storage device (DASD) 407, such as a hard disk drive. The memory 408 typically comprises volatile semiconductor random access memory (RAM). Each computer preferably includes a program product reader 410 that accepts a program product storage device 412, from which the program product reader can read data (and to which it can optionally write data). The program product reader can comprise, for example, a disk drive, and the program product storage device can comprise removable storage media such as a magnetic floppy disk, a CD-R disc, or a CD-RW disc. Each computer 400 communicates with the others over the network 310 through a network interface 414 that enables communication over a connection 416 between the network and the computer.

The CPU 402 operates under control of programming steps that are temporarily stored in the memory 408 of the computer 400. When the programming steps are executed, the Presentation Session Management System performs its functions. Thus, the programming steps implement the functionality of the system modules 100 illustrated in Figure 1. The programming steps can be received from the DASD 407, through the program product storage device 412, or through the network connection 416. The

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storage drive 410 can receive a program product 412, read programming steps recorded thereon, and transfer the programming steps into the memory 408 for execution by the CPU 402. As noted above, the program product storage device can comprise any one of multiple removable media having recorded computer-readable instructions, including magnetic floppy disks and CD-ROM storage discs. Other suitable program product storage devices can include magnetic tape and semiconductor memory chips. In this way, the processing steps necessary for operation in accordance with the invention can be embodied on a program product.

Alternatively, the program steps can be received into the operating memory 408 over the network 310. In the network method, the computer receives data including program steps into the memory 408 through the network interface 414 after network communication has been established over the network connection 416 by well-known methods that will be understood by those skilled in the art without further explanation. The program steps are then executed by the CPU to implement the processing of the Presentation Session system.

It should be understood that all of the computers 302, 304, 306, 308 of the computer system illustrated in Figure 3 have a construction similar to that shown in Figure 4, so that details described with respect to the Figure 4 computer 400 will be understood to apply to all computers of the system 300. Alternatively, any of the computers 302, 304, 306, 308 can have an alternative construction, so long as they can communicate with the other computers and support the functionality described herein.

### Scheduling Module

Figure 5 is an illustration of a Scheduling Module display window shown on a computer of the system illustrated in Figure 3. In the preferred embodiment, the presentation session management system is implemented over the Internet and is accessed through a web browser application. In particular, the system, through the Scheduling Module 102 (Figure 1), provides a web-based tool that allows Internet users to sign up for sessions and view the activities of the sessions in progress. The Scheduling Module also provides an interface where Internet users can request invitation to a session, where applicable, as well as where they can register to become a member.

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Becoming a member will typically provide additional participation benefits, such as special promotional bonus features and the like, but the complete suite of additional features will be up to the system designer.

Generally, the Scheduling Module display should provide a user with access to a "Sessions List" viewing area, a "Sessions-In-Progress" area, a "Become a New Member" area, and a "Become a Session Host" area. Such display areas are shown in the exemplary display illustrated in Figure 5.

The Figure 5 Scheduling Module display 500 includes a "Session List" viewing area 502 that shows a list of sessions on the schedule, both private (invitation only) and public (available for joining). In the case of a web site for product sales, for example, this is a public viewing area where product presentation sessions are listed, along with descriptions of the sessions, the date and time for each session, and an indication of who is hosting or leading each session. Preferably, a user has the ability to access a "host profile" section for information on the hosts. This may be accessed by clicking on a host name or by viewing a Host Information Area 504 of the display, such as by scrolling down the window 500 to where host information is listed. The Host Information Area also includes a display button 505 where users can obtain information on how to become a session host.

The Scheduling Module display also indicates sessions that are currently "in-session" and available for joining. In the Figure 5 display 500, this is indicated by the word "IN" adjacent an entry in the session list 502. The "IN" indication may also indicate the number of participants in the session. A group of display buttons 506 provides a user viewing the Scheduling Module display with the opportunity of joining a group. A user may join or enter an "in-session" group, and may sign up for a session yet to be initiated. The system may permit open joining by any user viewing the scheduling display 500. Alternatively, the system may enforce a membership scheme in which only members may join a session ("enter as a member"). Another option is to permit joining a session as a guest for a one-time visit or with any other restrictions that may be desired ("enter as a guest"). All of these options are shown in the joining buttons 506 illustrated in Figure 5.

Systems that include membership options will include a member area 510 in the scheduling display. The member area will include text windows in which a member may provide an assigned user name and user password. Those users who have not become members will be given the opportunity to register by clicking on one of the joining buttons 506.

### Community Viewing Module

Figure 6 is an illustration of a Community Viewing Module display window 600 shown on a computer of the system illustrated in Figure 3. As noted above, the presentation session management system of the preferred embodiment is implemented over the Internet and is accessed through a web browser application. The system, through the Community Viewing Module 104 (Figure 1), provides a web-based tool that allows Internet users to enter or join an interactive session. In the case of a product sales implementation, for example, the Community Viewing Module will display product information in a presentation area and will permit exchanges of messages among participants in an interaction area. The presentation area can thereby serve as an "infomercial" display area to illustrate the features of products available for purchase. For a product sales implementation, the Community Viewing Module display should provide a user with access to an interactive "chat room" viewing area, a product information presentation area, an order list area, a leader profile area, and a help area. Such display areas are shown in the exemplary display illustrated in Figure 5. For an instructional/classroom implementation, the presentation area should display material to be learned, with the interactive area available for students and the teacher/leader to exchange messages. Rather than include an order list area, an instructional implementation may include a text results area or a quiz area for students to check their understanding of the material.

Figure 6 shows a display window 600 for a product sales implementation. As such, the Figure 6 window includes a "chat room" interactive area 602 to show "who's talking", in which participants view messages exchanged as part of the chat room service that will be familiar to those skilled in the art. This permits the customer participants to interact with each other as well as with the sales session host. In the preferred

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embodiment, the chat facilities include the typical global chat 602 and also private chat 606.

In the product sales implementation of Figure 6, the presentation area is shown as a product features and information presentation area 610. This display area includes information on a product being featured, as selected by the session host. The product description should include pricing information and may include video or audio displays. The presentation area 610 may include, for example, a photographic image 612 of the product being featured. In the product sales context, a "BUY" display button 614 should be provided for a user to make a product purchase. The "BUY" button should activate a window or entry field in which quantity and other ordering information may be entered.

The product presentation area 610 may incorporate a "Product Availability" area 616 having a list of all products that have been presented, to permit users to add any of these items to their order list at any time. By clicking on a "Details" text for an item in the list, a customer can bring up a details page on the product in a new window. The Details button should also activate a window or entry field that accepts a quantity number and permits a customer to add that item to their order list. A "Buy" text for an item can be clicked to add that item to the user's product order. Other functions needed for e-commerce support will be readily apparent to those skilled in the art. In a classroom/learning implementation, the "Product Availability" area may include past classroom sessions or lesson plans, rather than available products. For example, rather than a product "buy" text, the user may find a "quiz" text, to test the user's understanding of the material.

The Community Viewing display window 600 also provides an order list area 620 in which customers may view their order, change quantities ordered, and delete items from the order list. The display also includes a Profile Area in which information is available for other chat room participants 624 and for the session host 628. In the preferred embodiment, the viewing of profiles (information about the customers or the host) in the profile area is done by selecting a customer name or host name from the chat list, and then clicking on that name or on a profile button in the profile area. The profile information will then be loaded and displayed in the profile area or in a new



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window. Finally, the display includes a navigation/help area 630 in which information or tips about an item may be displayed as the user display mouse hovers over the item.

A checkout button 634 initiates a checkout procedure in which user identification, product availability, shipping and delivery, credit card account information, and the like is entered by the user. This procedure may be initiated by a user at any time, such as when the user wants to leave the session, or may be initiated at the end of the product session, when the host decides that the presentation session should end. For an instructional presentation, an instructor/host may initiate the "checkout" procedure when a class has ended. Moreover, if desired, the system may prevent students from checkout during a class session, and may permit such action only by initiation of the instructor/host. Each customer is directed to click the "Checkout Button" to proceed to a checkout area. The checkout area supports both member and non-member checkout, involving the storing of billing/shipping and credit card information on file or typing all the information in at checkout time. Each sale will log the name of the host of that session in the transaction log.

#### Host Control Module

Figure 7 is an illustration of a Host Control Module display window 700 shown on a computer of the system illustrated in Figure 3. As noted above, the presentation session management system of the preferred embodiment is implemented over the Internet and is accessed through a web browser application. The system, through the Host Control Module 108 (Figure 1), provides a web-based tool that allows Internet users to get information on becoming a host, as well as permitting existing hosts to log in to the web site to schedule the interactive sessions. The Host Control Module display window 700 will include a host information area 702 in which information regarding becoming a host will be displayed. The information display may be initiated by a display button 704, if desired.

The Host Control Module display window 700 also will include a login area 710 in which hosts must provide their user name and user password. Entering such information then permits them to modify entries in a session list area 714 by first clicking on a "Modify" button. In this way, registered hosts can change session names,

session meeting parameters, and host names for the sessions that they lead. The display also will include a "New Session" button 720 that will initiate a procedure in which a new session is added to the schedule.

#### Host Transaction Module

5           Figure 8 is an illustration of a Host Transaction Module display shown on a computer of the system illustrated in Figure 3. As noted above, the Presentation Session Management System of the preferred embodiment is implemented over the Internet and is accessed through a conventional web browser application. The system, through the Host Transaction Module 106 (Figure 1), provides a web-based tool that allows Internet  
10       users who have been designated "hosts" or "leaders" to login and create an interactive session that other Internet users can enter and join, and thereby interact with the host and with the other joined users. Thus, any Internet user with a web browser can gain access to the system and can participate in an on-line interactive e-commerce session, viewing product information and making purchases, and any Internet user is potentially a session  
15       guest and a session host.

          An interactive presentation session comprises a computer process that is operated in accordance with, for example, chat room services that permit chat room participants to share messages with each other over the Internet after a user first initiates a chat "room". In the preferred embodiment, a user name and user password are required to  
20       initiate an interactive session. Once initiated, the session (including the information presented and the users who are allowed to participate) is controlled by the host who initiated it.

          The Host Transaction Module display window 800 will include a hosted chat room area 802, a presentation area 806, a group order list area 810, a profile area 814, and a navigation area 820. The display will also include a private chat facility 824 and a checkout-initiation button 828. The chat room 802 should contain the same messages  
25       as users will view in the chat room of the Community Viewing Module display of Figure 6. Similarly, the profile area 814 should contain the same information as that of the profile area in the Community Viewing Module display.

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The chat room area 802 of the Host Transaction display 800 is where the host viewing the display will interact with group participants, viewing messages about the information shown in the presentation area 806. In the product sales implementation, the chat room 802 will permit users to discuss the products that have been selected for presentation by the host. In the classroom implementation, the chat room will permit users to discuss the material being presented for learning. The chat room services will support all conventional chat functionality well-known to those skilled in the art, such as global chat 802 and private chat 824.

The Product Information window 808 of the presentation area 806 is a display area in which detailed information is presented to all session participants and is viewed by the host. The presentation area may incorporate a Product Availability area 830 that lists all the products available to be displayed. The host selects a product from the list, and then clicks the "Show" text or button 832 to send the product information to the product presentation window in the Community Viewing display (Figure 6) of all users who are participating in the session. In this way, the host can respond to session participant comments and interest by making timely selection of products for display in the presentation window. Thus, the host has control over the timing and content of the presentation. It should be understood that the material in the product information window of the host display 800 should be essentially the same information as that shown in the product information of the Community Viewing display of Figure 6, which is viewed by joined users. Thus, the Product Information area may also include a photographic image 809, or the information sent to users upon the "Show" command of the host may be text, audio, and images of the product selected.

By clicking on the "details" text next to an item in the list 830, a host can bring up a detail page on that product. The group order list area 810 allows hosts to monitor running total amounts from each user. Details on individual orders can be obtained by clicking the "details" button for a user. In the classroom/instructional implementation, the group order area can show student performances on tests, for example. The profile area 814 preferably provides the same information to a host as can be obtained by users through the profile area 624 of the Community Viewing display shown in Figure 6. Finally, the navigation area 820 includes a "drop user" option that lets a host enter the

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5 name of a user from the list of participants 814 and then select a "DROP" button 838 to suspend that user's participation in the session. As with conventional chat facilities, dropping a user from a session will prevent that user from communicating with joined users through the interaction area 802. The server will not accept messages from the dropped user for display in the Community Viewing display. Thus, the dropped user will no longer be able to exchange and post messages to the interaction area of the host, nor will the user be able to exchange or post messages to the interaction area shown in the Community Viewing window of Figure 6. The navigation area 820 may also include a "hover" help window like that of the Community Viewing display shown in Figure 6.

System Operation

Figure 9 is a flow diagram that illustrates the processing steps executed by the computer processing system of Figure 3 to implement a system that provides a network interactive presentation session in accordance with the present invention. Network users communicate via the presentation session system through a graphical interface in which users exchange messages through an interaction display area and are simultaneously shown information in a presentation display area.

In the first processing step, represented by the flow diagram box numbered 902, a host initiates a network presentation session. As noted above, the host is a network user who has previously been registered as a host and has been granted the necessary authorization. In the preferred embodiment, this will involve password protection for the session initialization process. The presentation session comprises a computer network process with which multiple users may communicate, as will be readily understood by those skilled in the art. In the next processing step 904, the host selects the information to be shown in the presentation area of the interface display. In a product selling e-commerce context, this step involves the display of product information and can include graphical images or photographs, as well as text. In a learning context, the information presentation step 904 usually involves selection of learning materials. This step 904 typically involves retrieval of information from a network computer or storage device, such as an information server, and results in distribution of the information to session participants. That is, the information viewed by session participants is dynamically changed at the web site in response to the session host selections. Next, network users join the presentation session, as indicated by the flow diagram box numbered 906. Joining the presentation session may be controlled by requiring a user password or other restrictions on entry, if desired.

After the host and users have joined the presentation session, meaning that they can communicate interactively over the network, the interface permits exchange of messages among the host and users, as indicated by the flow diagram box numbered 908. The next flow diagram box 910 indicates that the host manages group interaction and group composition. This box indicates that the host can make use of the interaction area to guide the exchange of messages, posting messages and thereby keeping the

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exchanges relevant and encouraging compliance with the goals of the interactive session. If needed for the preservation of efficient exchange, step 910 contemplates that the host can retract authorization for participation from selected session participants, dropping users and thereby changing the composition of the group. In this way, unruly or uncooperative users can be eliminated from the group, for the benefit of the remainder.

At the decision box 912, the session host makes a determination as to when the presentation session should end. If the session should not end, a negative outcome at the decision box, then processing returns to the box 904 sequence, where the host again may select information for presentation, users may join (or leave) at box 906, users exchange messages at box 908, and the host manages the group at box 910. If the host determines that the session should end, an affirmative outcome at the decision box 912, then the host ends the session and initiates a checkout process, as indicated by the flow diagram box numbered 914. In the product sales context, this may involve settling of accounts with payment for orders and the like. In the learning context, this step may involve the awarding of a grade or simply the recording of attendance at the session. Normal operation of the system then continues, for initiation of other presentation sessions.

The flow diagrams of Figures 10, 11, 12, and 13 illustrate the processing of the Scheduling Module, Community Viewing Module, Host Control Module, and Host Transaction Module, respectively. Those skilled in the art will understand that, although the flow diagrams imply a sequential process to the module operating steps, the programming for the various modules may be implemented in a manner other than traditional sequential, procedural programming disciplines, including object oriented programming techniques. The procedural representation of the flow diagrams is for purposes of explanation only.

#### Scheduling Module Operation

Figure 10 is a flow diagram that illustrates the processing steps executed by the computer processing system of Figure 3 to implement the processing for the Scheduling Module. As noted above, the presentation session management system of the preferred embodiment is implemented over the Internet and is accessed through a Web browser

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application, and thereby provides a web-based tool that allows Internet users to sign up for sessions and view the activities of the sessions in progress. Accordingly, it should be understood that the Scheduling Module processing illustrated in Figure 10 will be initiated by a user who first visits a first web page, or a home page, of the presentation session management system website and then calls up the scheduling display page.

Figure 14 is a display window representation of an exemplary home page of the Presentation Session Management System. The display 1402 shows a browser interface that indicates the user is at the system home page. To call up the scheduling display page, the user may click on a "Schedule" button or "Go to session listing" link 1404 at the home page. Such action begins the Schedule Module processing, at the Start box of Figure 10. The Scheduling Module thereafter responds to user actions at the scheduling module display page (Figure 5) as described below.

The first Scheduling Module processing step, represented by the decision box numbered 1002, indicates processing that responds to a user clicking on the "Member" display button illustrated in Figure 5. In particular, if a user clicks on the "Member" button, an indication that the user wants to become a session member and receive a password, then processing follows the affirmative outcome of the decision box 1002, so that membership processing is carried out at the flow diagram box numbered 1004. The membership processing may include user name entry, e-mail address or other identity verification, and the like. A password should be returned to the user in an appropriate display, and the user will thereby be entitled to the additional benefits of membership, as defined by the system designer.

If the "Member" button was not selected, a negative outcome at the decision box 1002, or after completion of the membership process at step 1004, then the next illustrated processing step 1006 is to respond to a user selection from the session list. As described above in conjunction with Figure 5, the session list of the Scheduling Module display shows available sessions and provides an indication of whether a list entry is currently in session or is available for a future time and date. If a user wants to join an on-going session or wants to register for a future session, an affirmative outcome at the decision box 1006, then the system next checks to see if the selected session requires membership. This is represented by the decision box numbered 1008.

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Through Internet processing well-known to those skilled in the art, the system can automatically determine characteristics of a user, including if the user is a member. The situation where membership is required, but such membership is absent from the user characteristics, is represented by an affirmative outcome at the decision box 1008, in which case Scheduling Module processing returns to the membership box 1002. The situation where membership is required for the selected session, and the user is already a member, is represented by a negative outcome at the decision box 1008, in which case processing proceeds for the user to join the session or register for it, at the flow diagram box numbered 1010. Upon joining a session, processing shifts to the Community Viewing display, as indicated in Figure 10.

If the user did not want to join a session or register for one, a negative outcome at the previous decision box 1006, then the user might choose to view profile details on a session, as indicated by the affirmative outcome at the decision box 1012. If so, then the session details are provided at the flow diagram box numbered 1014. The user then may continue with any other Scheduling Module processing, beginning back at the decision box 1002. If the user does not want to view session details, a negative outcome at box 1012, and instead chooses to exit the scheduling display, then processing follows the affirmative outcome of the "exit" decision box 1016 and computer system processing continues. If exit is not selected, then again the user may continue with any other Scheduling Module processing, beginning back at the decision box 1002.

#### Community Viewing Module Operation

Figure 11 is a flow diagram that illustrates the processing steps executed by the computer processing system of Figure 3 to implement the processing for the Community Viewing Module. It should be understood that, in the preferred embodiment, the Community Viewing Module processing illustrated in Figure 11 will be initiated only by a user who has joined an on-going presentation session. Such joining begins the Community Viewing Module processing, at the Start box of Figure 11. Alternatively, the system might be designed to permit "guest" status during a session, or perhaps a time-limited join status, in which case the Figure 11 operation also will follow.



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Once a user has joined a session, one of the first actions the user may take is to participate in the chat dialogue, as indicated by the first decision box 1102. The chat implementation may be provided, for example, by any of the various Internet relay chat (IC) facilities currently available. A user can always simply observe the dialogue being shown in the interaction display area shown in Figure 6. If the user wishes to share a message with the group, an affirmative outcome at the decision box 1102, then the user composes a message and at the flow diagram box numbered 1104 the user sends the message. Those skilled in the art will understand that the sent message then appears in the chat window of the interaction display area described above. After sending the chat message, the user once again can select from the full complement of actions available to any user presented with the Community Viewing Module display. This is represented by the processing return to the first box 1102.

If the user does not send a chat message, a negative outcome at the decision box 1102, then the user may want to view the details of entries in the presentation area of the Community Viewing display, a viewing that typically is initiated by selecting a "Buy" or "Learn" button in the display. This action is represented by the affirmative outcome at the flow diagram box numbered 1106 and the concomitant processing of the flow diagram box numbered 1108. The processing of the request at box 1108 may involve retrieving such details from an information server. Following the details viewing at box 1108, the user again can select from the full complement of display options available, beginning at box 1102.

If the user does not request viewing of the information presentation area details, a negative outcome at the decision box 1106, then the user may wish to view order entry details. As noted above, in the product sales context, the details concern the user's purchases, but in the learning system context, the details may concern a student's test scores, attended classes, or other indicators of learning. Such viewing of order entry details is represented by the affirmative outcome of the decision box 1110 and the flow diagram box numbered 1112. Processing of the order entry details may involve retrieving information from a server and providing it to the requesting user. System processing then resumes at box 1102.

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If the user does not want to view order list details, a negative outcome at the decision box 1110, then the user may want to view profile details, either for the session host or for other joined users. The viewing of profile details is represented by the affirmative outcome at the decision box 1114 and the flow diagram box numbered 1116, followed by the full complement of Community Viewing display options beginning at box 1102. If no profile details are requested, a negative outcome at the decision box 1114, then the user may want to initiate checkout processing, as indicated by the decision box numbered 1118.

Checkout processing, represented by the affirmative outcome at the decision box 1118, causes the system to terminate user participation in the presentation session. As noted above, this may include payment processing and arrangement for shipping details. If the user does not choose to initiate checkout, then the user may once again may select from the full complement of display options available, beginning at box 1102.

#### Host Control Module Operation

Figure 12 is a flow diagram that illustrates the processing steps executed by the computer processing system of Figure 3 to implement the processing for the Host Control Module. It should be understood that, in the preferred embodiment, the Host Control Module processing illustrated in Figure 12 will be initiated by a user who visits a first web page, or a home page, of the presentation session management system web site and then calls up the Host Control display page. This may occur, for example, by a user clicking on a "Become a Session Host" or "Become a Leader" button, or on a "Go to Host Login" link at the system Internet home page. Such action begins the Host Control processing, at the Start box of Figure 12. The Host Control Module thereafter responds to user actions at the Host Control Module display page as described below.

The first illustrated host control processing step, represented by the decision box numbered 1202, indicates processing that responds to a user clicking on the "Become a Session Host" display button illustrated in Figure 5 and Figure 7. In particular, if a user clicks on the "Become a Session Host" button, then processing follows the affirmative outcome of the decision box 1202, so that host registration processing is carried out. The membership processing, represented by the flow diagram box numbered

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1204, may include user name entry, e-mail address or other identity verification, and the like. A password should be returned to the user in an appropriate display, and the user will thereby be registered as a host and entitled to certain additional benefits, such as scheduling sessions and initiating them. Other benefits and rights may be provided as defined by the system designer. After host registration, processing resumes with additional host control options, as described further below. If the "Become a Session Host" button was not selected, a negative outcome at the decision box 1202, then the next processing step 1206 is to permit a user who is already a registered host to go ahead with host login. This processing is represented by an affirmative outcome at the decision box 1206 and the flow diagram box numbered 1208.

After a user has registered to become a host at the registration processing of box 1204, or after the host login of box 1208, or if no host login was requested (a negative outcome at the decision box 1206), the user next has the option of attempting to change information for a session listed in the display, or adding a new session to the list. This is indicated by the decision box numbered 1210. If the user attempts to make such a change or addition, an affirmative outcome at the decision box 1210, then at the decision box 1212 the system next checks to determine if the user is a registered host. If the user is a host, an affirmative outcome at the decision box 1212, then the session changes desired by the user/host are processed. This processing is indicated at the flow diagram box numbered 1214. System processing then continues.

If the user does not request session changes, a negative outcome at the decision box 1210, then system processing also continues. If desired, for example, the user may take browser to a new destination at the system presentation web site or at any other web site.

### Host Transaction Module

Figure 13 is a flow diagram that illustrates the processing steps executed by the computer processing system of Figure 3 to implement the processing for the Host Transaction Module. It should be understood that, in the preferred embodiment, the Host Transaction Module processing illustrated in Figure 13 will be executed only for a user who has completed a host login procedure for confirmation of authorization.

Thus, the first processing step indicated at the decision box numbered 1302 is to determine if the user has completed the host login procedure. If the user has not, a negative outcome at the decision box 1302, then the system exits the user from any further Host Transaction Module processing, as indicated by the flow diagram box  
5 numbered 1304.

If the user has completed host login, an affirmative outcome at box 1302, then the first action the user-host might take is to select information for display in the presentation area, as represented by the decision box 1306. If the user-host makes a selection for display in the presentation area, an affirmative outcome at the decision box  
10 1306, then the Host Transaction Module responds by causing the information to be retrieved and sent to the other session participants, to their respective Community Viewing Module displays. In the preferred embodiment of an Internet implementation, this may be easily achieved for an Internet web-based system, which will be understood by those skilled in the art without further explanation to comprise the processing of the  
15 flow diagram box numbered 1308. After the new presentation area information has been displayed, or if no such action was requested by the host, the next processing that may be initiated by the host is viewing the group order list details, at the decision box numbered 1310.

The host may view group order details, as noted above, by clicking on  
20 appropriate text and/or display buttons, and the system will provide the requested information. This line of processing is represented by the affirmative outcome at the decision box 1310 and the flow diagram box numbered 1312. The host then has the option of selecting from the full complement of actions available to a host after login, as represented by the return of processing to the decision box numbered 1306. If no  
25 group order details are requested, a negative outcome at the box 1310, then the host may want to participate in the chat discussion. Chat discussion is represented by the decision box numbered 1314. The chat implementation may be provided, for example, by any of the various Internet relay chat (IRC) facilities currently available.

If the host wishes to share a message with the group, an affirmative outcome at  
30 the decision box 1314, then the user composes a message and at the flow diagram box numbered 1316 the user sends the message via the chat facility. Those skilled in the art

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will understand that the sent message then appears in the chat window of the interaction display area of all session participants. After sending the chat message, the user once again can select from the full complement of actions available to any host presented with the Host Transaction Module display. This is represented by the processing return to the decision box 1306.

If the host does not send a chat message, a negative outcome at the decision box 1314, then the host may want to drop a particular user from the session. This may be desired, for example, to limit the size of the group or to rid the group of disruptive participants. If the host wants to drop a selected user, the host enters the user name in the Host Transaction Module display and selects the "Drop" display button, as described above. Such processing is represented by the affirmative outcome at the decision box 1318 and the flow diagram box numbered 1320. The host thereafter can select any action desired, indicated by the return to box 1306.

If the host did not drop a user, a negative outcome at box 1318, then the host may want to view the profile details. The viewing of profile details is represented by the affirmative outcome at the decision box 1322 and the flow diagram box numbered 1324, followed by the full complement of Host Transaction display options beginning at box 1306. If no profile details are requested, a negative outcome at the decision box 1322, then the host may want to end the session, as indicated by the affirmative outcome at the decision box numbered 1326. If the session is not being terminated, then the host can select any action desired, indicated by the return to box 1306 from box 1326.

If the host wants to terminate the presentation session, an affirmative outcome at box 1326, then the system initiates the checkout process at the flow diagram box numbered 1328. As noted above, this processing may involve order tabulation, payment processing, shipping information, and the like. System processing may then continue.

It should be understood that variations to the system illustrated in the drawings may be implemented without departing from the teachings of the invention. For example, Figure 15 is an illustration of a display screen alternative implementation to the display shown in Figure 2, in which a network user has launched a web browser program to view the Presentation Session Management System home page in the browser window 1502. In contrast to the Figure 2 display, the Figure 15 display shows a

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presentation display area 1504 and an interaction display area 1506 as two separate sub-windows placed over the underlying system home page window 1508. As before, however, the same program modules (Figure 1) are still responsible for generating the displays and controlling the information shown therein. The remaining window artifacts of Figure 15 are those of a standard web browser application, including a title bar 1510 with window sizing icons 1512, a menu bar 1514, and a browser navigation tool bar 1516. A task bar or system tray 1518 resides at the bottom of the display window 1502.

#### Advantages of the Invention

The present invention provides a computer information processing system in which network users interactively communicate with each other during a host-directed presentation session through an interaction display area and are shown information in a simultaneously shown presentation display area, wherein the presentation information is selected by a user who is designated the session host. The host initiates an interactive presentation session that the other network users may join and, during the session, the host may determine the information to be presented in the information display area and may manage the users who are permitted to participate in the session. The system can be advantageously used to manage presentation sessions in which multiple users can exchange comments in the interaction area in response to information in the presentation area. The information in the presentation area may concern, for example, products available for purchase, or classroom material to be learned. The interaction area may be the site where products are discussed and purchases are arranged, or where student questions or examinations are answered. In this way, the system provides efficient on-line group interaction between a group host and group guests in a session, such that the group host has control over information presented to the entire group and has control over the composition of the group.

The present invention has been described above in terms of a presently preferred embodiment so that an understanding of the present invention can be conveyed. There are, however, many configurations for information processing systems not specifically described herein but with which the present invention is applicable. The present invention should therefore not be seen as limited to the particular embodiments described herein, but rather, it should be understood that the present invention has wide applicability with respect to

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information processing systems generally. All modifications, variations, or equivalent arrangements and implementations that are within the scope of the attached claims should therefore be considered within the scope of the invention.

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CLAIMS

1. A method of operating a computer network system having multiple users, the method comprising:

initiating a presentation session network process that permits joint interactive communications among network users under control of a network user who has been designated a session host;

joining of the initiated presentation session by at least one user in addition to the host of the presentation session; and

displaying presentation information in a presentation area of a community viewing display and identification information of each joined user in an interaction area of the community viewing display at each user;

wherein the timing and content of the presentation information is directed by the session host for viewing by users in their respective presentation area.

2. A method as defined in claim 1, further including the step of permitting the session host to halt communication between a designated user and the other presentation session participants, thereby restricting the users who are permitted to join the presentation session.

3. A method as defined in claim 1, wherein the step of presenting a display comprises presenting the community viewing display only to users who have joined the presentation session.

4. A method as defined in claim 3, wherein the step of joining the initiated presentation session comprises the steps of:

presenting a scheduling display that provides users with a list of presentation sessions available for joining;

requesting authorization from a user for participation in an available presentation session that corresponds to the initiated presentation session;



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providing the requested authorization to the user in response to receipt of user information; and

joining the user to the initiated presentation session.

5           5.       A method as defined in claim 4, wherein the step of providing the requested authorization comprises providing the user with a password, and the step of permitting the user to join comprises receiving the previously provided password back from the user and then permitting the user to join the initiated presentation session.

10           6.       A method as defined in claim 1, further including the steps of:  
receiving purchase selections from users for purchase of product shown in the presentation area; and  
initiating a checkout process that implements payment procedures for the selections and ends the presentation session.

7.       A method as defined in claim 1, wherein the user is designated the session host only after providing user information through a host control display.

15           8.       A method as defined in claim 1, wherein a user views a host control display to determine available times for initiating a presentation session and requesting authorization to be designated a session host for a selected available presentation session time.

9.       A method as defined in claim 8, wherein the user is designated the session host only after providing user information through a host control display.

20           10.      A method as defined in claim 1, wherein the step of initiating a presentation session comprises a session host providing authorization information through a host transaction display.

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11. A method as defined in claim 10, wherein the host transaction display includes presentation and identification display areas that provide the same information as contained in the presentation area and identification area of the community viewing display.

12. A method as defined in claim 10, wherein the session host selects the  
5 information that is displayed in the presentation area of the host transaction display.

13. A method as defined in claim 12, wherein the host transaction display includes an interaction display area that identifies all joined users and shows messages from individual users to the presentation session participants.

14. A method as defined in claim 13, wherein the presentation area shows product  
10 information, and the interaction area of the host transaction display shows product purchases by the joined users.

15. A method as defined in claim 1, wherein the community viewing display includes an interaction display area that identifies all joined users and shows messages from individual users to the presentation session participants.

16. A method as defined in claim 15, wherein the community viewing display  
15 presentation area of a user's display shows product information, and the interaction area of the user's community viewing display shows product purchases by the user.

17. A method of operating a computer network system having multiple users, the  
method comprising:  
20 initiating a presentation session network process that permits joint interactive communications among network users under control of a network user who has been designated a session host;  
joining of the initiated presentation session by at least one user in addition to the host of the presentation session;

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displaying presentation information in a presentation area of a community viewing display, wherein the presentation information is selected by the session host and is then placed in the presentation area for viewing by users;

5 displaying identification information of each joined user in an interaction area of the community viewing display;

receiving purchase selections from users for purchase of product shown in the presentation area; and

initiating a checkout process that implements payment procedures for the selections and ends the presentation session.

10 18. A method as defined in claim 17, further including the step of permitting the session host to halt communication between a designated user and the other presentation session participants, thereby restricting the users who are permitted to join the presentation session.

15 19. A method as defined in claim 17, wherein the community viewing display presentation area of a user's display shows product information, and the interaction area of the user's community viewing display shows product purchases by the user.

20 20. A computer apparatus comprising:  
a central processing unit at a first node of a computer network; and  
a presentation session process that operates in the computer network under control  
of the central processing unit to implement a network presentation session management  
system by initiating a presentation session network process that permits joint interactive  
communications among network users under control of a network user who has been  
designated a session host, joining of the initiated presentation session by at least one user in  
addition to the host of the presentation session, and displaying presentation information in  
25 a presentation area of a community viewing display and identification of each joined user in  
an interaction area of the community viewing display at each user, wherein the timing and  
content of the presentation information is directed by the session host for viewing by users  
in their respective presentation areas.

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21. A computer apparatus as defined in claim 20, wherein the presentation session process permits the session host to halt communication between a designated user and the other presentation session participants, thereby restricting the users who are permitted to join the presentation session.

5 22. A computer apparatus as defined in claim 20, wherein the presentation session process presents the display of information by presenting the community viewing display only to users who have joined the presentation session.

23. A computer apparatus as defined in claim 22, wherein the presentation session process joins a user to the initiated presentation session by:

10 presenting a scheduling display that provides users with a list of presentation sessions available for joining;

receiving a request from a user for authorization to participate in an available presentation session that corresponds to the initiated presentation session;

15 providing the requested authorization to the user in response to receipt of user information; and

joining the user to the initiated presentation session.

24. A computer apparatus as defined in claim 23, wherein the presentation session process provides the requested authorization by providing the user with a password, and the step of permitting the user to join comprises receiving the previously provided password back  
20 from the user and then permitting the user to join the initiated presentation session.

25. A computer apparatus as defined in claim 20, wherein the presentation session process performs further processing comprising the steps of:

receiving purchase selections from users for purchase of product shown in the presentation area; and

25 initiating a checkout process that implements payment procedures for the selections and ends the presentation session.

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26. A computer apparatus as defined in claim 20, wherein the user is designated the session host only after providing user information through a host control display.

27. A computer apparatus as defined in claim 20, wherein a user views a host control display to determine available times for initiating a presentation session and requesting authorization to be designated a session host for a selected available presentation session time.

28. A computer apparatus as defined in claim 27, wherein the user is designated the session host only after providing user information through a host control display.

29. A computer apparatus as defined in claim 20, wherein the step of initiating a presentation session comprises a session host providing authorization information through a host transaction display.

30. A computer apparatus as defined in claim 29, wherein the host transaction display includes presentation and identification display areas that provide the same information as contained in the presentation area and identification area of the community viewing display.

31. A computer apparatus as defined in claim 29, wherein the session host selects the information that is displayed in the presentation area of the host transaction display.

32. A computer apparatus as defined in claim 31, wherein the host transaction display includes an interaction display area that identifies all joined users and shows messages from individual users to the presentation session participants.

33. A computer apparatus as defined in claim 32, wherein the presentation area shows product information, and the interaction area of the host transaction display shows product purchases by the joined users.

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34. A computer apparatus as defined in claim 20, wherein the community viewing display includes an interaction display area that identifies all joined users and shows messages from individual users to the presentation session participants.

5 35. A computer apparatus as defined in claim 34, wherein the community viewing display presentation area of a user's display shows product information, and the interaction area of the user's community viewing display shows product purchases by the user.

36. A computer apparatus comprising:  
a central processing unit at a first node of a computer network; and  
a presentation session process that operates in the computer network under control  
10 of the central processing unit to implement a network presentation session management system by initiating a presentation session network process that permits joint interactive communications among network users under control of a network user who has been designated a session host, joins to the initiated presentation session at least one user in addition to the host of the presentation session, displays presentation information in a  
15 presentation area of a community viewing display, wherein the timing and content of the presentation information is directed by the session host for viewing by users in their respective presentation areas, displays identification information of each joined user in an interaction area of the community viewing display, receives purchase selections from users for purchase of product shown in the presentation area, and initiates a checkout process that  
20 implements payment procedures for the selections and ends the presentation session.

37. A computer apparatus as defined in claim 36, wherein the presentation session process permits the session host to halt communication between a designated user and the other presentation session participants, thereby restricting the users who are permitted to join the presentation session.

25 38. A computer apparatus as defined in claim 36, wherein the community viewing display presentation area of a user's display shows product information, and the interaction area of the user's community viewing display shows product purchases by the user.

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39. A network information server comprising:

a central processing unit at a first node of a computer network;

an operating system executed by the central processing unit that provides a graphical user interface programming environment; and

5 an information server operative when program instructions are executed by the central processing unit to support a presentation session process that initiates a network presentation session in response to an initiation request by a network user who has been designated a session host, such that at least one user in addition to the session host can exchange messages via the presentation session process under control of the session host, wherein the information  
10 server includes a Community Viewing module that provides a community viewing display having a presentation area in which information is displayed and having an interaction area in which each joined user is identified, and wherein the timing and content of the presentation information is directed by the session host for viewing by users in their respective presentation areas.

15 40. A network information server wherein program instructions are executed by a central processing unit at a first node of a computer network, the network information server comprising:

a Host Transaction Module that initiates a network presentation session process in response to an initiation request by a network user who has been designated a session host,  
20 such that at least one network user in addition to the session host can exchange messages via the presentation session process under control of the session host; and

a Community Viewing Module that provides a community viewing display at each joined user, the display having a presentation area in which information is displayed and having an interaction area in which each joined user is identified, and wherein the timing and  
25 content of the presentation information is directed by the session host for viewing by users in their respective presentation areas.

41. A network information server as defined in claim 40, wherein the Host Transaction Module permits the session host to halt communication between a designated

user and the other presentation session participants, thereby restricting the users who are permitted to join the presentation session.

42. A network information server as defined in claim 40, wherein Community Viewing Module provides the community viewing display only to users who have joined the presentation session.

43. A network information server as defined in claim 42, further including a Scheduling Module that generates a scheduling display having a list of presentation sessions available for joining by network users, that receives a request from a user for authorization to participate in an available presentation session that corresponds to the initiated presentation session, provides the user-requested authorization to the user, and permits the user to join the initiated presentation session.

44. A network information server as defined in claim 43, wherein the Scheduling Module provides the user-requested authorization by providing the user with a password, and the network information server further includes a Host Control Module that communicates with the Scheduling Module and permits a user to join a presentation session after receiving the password previously provided by the Scheduling Module back from the user.

45. A network information server as defined in claim 40, wherein the session host is a user who has been designated a session host.

46. A network information server as defined in claim 45, further including a Host Control Module that generates a host control display through which a user provides user information and thereafter is designated the session host.

47. A network information server as defined in claim 45, further including a Host Control Module that generates a host control display wherein a user determines available times for initiating a presentation session and requests authorization to be designated a session host for a selected available presentation session time.



-39-

48. A network information server as defined in claim 47, wherein the user is designated the session host only after providing user information through the host control display.

5 49. A network information server as defined in claim 40, wherein the Host Transaction Module initiates a presentation session by receiving authorization information back from a session host through the host transaction display.

10 50. A network information server as defined in claim 49, wherein the host transaction display includes presentation and identification display areas that provide the same information as contained in the presentation area and identification area of the community viewing display.

51. A network information server as defined in claim 49, wherein the session host selects the information that is displayed in the presentation area of the host transaction display.

15 52. A network information server as defined in claim 51, wherein the host transaction display includes an interaction display area that identifies all joined users and shows messages from individual users to the presentation session participants.

53. A network information server as defined in claim 52, wherein the presentation area shows product information, and the interaction area of the host transaction display shows product purchases by the joined users.

20 54. A network information server as defined in claim 40, wherein the community viewing display includes an interaction display area that identifies all joined users and shows messages from individual users to the presentation session participants.

55. A network information server as defined in claim 54, wherein the community viewing display presentation area of a user's display shows product information, and the

interaction area of the user's community viewing display shows product purchases by the user.

56. A network information server comprising program instructions that are executed by a central processing unit at a first node of a computer network, the network information server comprising:

a Host Transaction Module that initiates a network presentation session process in response to an initiation request by a network user who has been designated a session host, such that at least one network user in addition to the session host can exchange messages via the presentation session process under control of the session host;

a Community Viewing Module that provides a community viewing display at each joined user, the display having a presentation area in which information is displayed and having an interaction area in which each joined user is identified, wherein the timing and content of the presentation information is directed by the session host for viewing by the users in their respective presentations, and wherein the Community Viewing Module provides the community viewing display only to users who have joined the presentation session; and

a Scheduling Module that generates a scheduling display having a list of presentation sessions available for joining by network users, that receives a request from a user for authorization to participate in an available presentation session that corresponds to the initiated presentation session, provides the user-requested authorization to the user, and permits the user to join the initiated presentation session.

57. A network information server as defined in claim 56, wherein the Host Transaction Module permits the session host to halt communication between a designated user and the presentation session, thereby restricting the users who are permitted to join the presentation session.

58. A network information server as defined in claim 56, wherein the Scheduling Module provides the user-requested authorization by providing the user with a password, and the network information server further includes a Host Control Module that communicates

-41-

with the Scheduling Module and permits a user to join a presentation session after receiving the password previously provided by the Scheduling Module back from the user.

59. A network information server as defined in claim 56, wherein the session host is a user who has been designated a session host.

5 60. A network information server as defined in claim 59, further including a Host Control Module that generates a host control display through which a user provides user information and thereafter is designated the session host.

61. A network information server as defined in claim 59, further including a Host Control Module that generates a host control display wherein a user determines available  
10 times for initiating a presentation session and requests authorization to be designated a session host for a selected available presentation session time.

62. A network information server as defined in claim 61, wherein the user is designated the session host only after providing user information through the host control display.

15 63. A network information server as defined in claim 56, wherein the Host Transaction Module initiates a presentation session by receiving authorization information back from a session host through the host transaction display.

64. A network information server as defined in claim 63, wherein the host transaction display includes presentation and identification display areas that provide the same  
20 information as contained in the presentation area and identification area of the community viewing display.

65. A network information server as defined in claim 63, wherein the session host selects the information that is displayed in the presentation area of the host transaction display.

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66. A network information server as defined in claim 65, wherein the host transaction display includes an interaction display area that identifies all joined users and shows messages from individual users to the presentation session participants.

5 67. A network information server as defined in claim 66, wherein the presentation area shows product information, and the interaction area of the host transaction display shows product purchases by the joined users.

68. A network information server as defined in claim 56, wherein the community viewing display includes an interaction display area that identifies all joined users and shows messages from individual users to the presentation session participants.

10 69. A network information server as defined in claim 68, wherein the community viewing display presentation area of a user's display shows product information, and the interaction area of the user's community viewing display shows product purchases by the user.

15 70. A program product for use in a computer system that executes program steps recorded in a computer-readable media to perform a method for operating a computer system to implement a presentation session management system, the program product comprising:

a recordable media;

a program of computer-readable instructions executable by the computer system to perform steps comprising:

20 initiating a presentation session network process that permits joint interactive communications among network users under control of a network user who has been designated a session host;

joining of the initiated presentation session by at least one user in addition to the host of the presentation session; and

25 displaying presentation information in a presentation area of a community viewing display and identification information of each joined user in an interaction area of the community viewing display at each user;

-43-

wherein the timing and content of the presentation information is directed by the session host for viewing by users in their respective presentation area.

71. A program product as defined in claim 70, further including the program step of permitting the session host to halt communication between a designated user and the other presentation session participants, thereby restricting the users who are permitted to join the presentation session.

72. A program product as defined in claim 70, wherein the program step of presenting a display comprises presenting the community viewing display only to users who have joined the presentation session.

73. A program product as defined in claim 72, wherein the program step of joining the initiated presentation session comprises the steps of:

presenting a scheduling display that provides users with a list of presentation sessions available for joining;

requesting authorization from a user for participation in an available presentation session that corresponds to the initiated presentation session;

providing the requested authorization to the user in response to receipt of user information; and

joining the user to the initiated presentation session.

74. A program product as defined in claim 73, wherein the program step of providing the requested authorization comprises providing the user with a password, and the step of permitting the user to join comprises receiving the previously provided password back from the user and then permitting the user to join the initiated presentation session.

75. A program product as defined in claim 70, wherein the performed program steps further include:

receiving purchase selections from users for purchase of product shown in the presentation area; and

-44-

initiating a checkout process that implements payment of procedures for the selections and ends the presentation session.

76. A program product as defined in claim 70, wherein the user is designated the session host only after providing user information through a host control display.

5           77. A program product as defined in claim 70, wherein a user views a host control display to determine available times for initiating a presentation session and requesting authorization to be designated a session host for a selected available presentation session time.

10           78. A program product as defined in claim 77, wherein the user is designated the session host only after providing user information through a host control display.

79. A program product as defined in claim 70, wherein the program step of initiating a presentation session comprises a session host providing authorization information through a host transaction display.

15           80. A program product as defined in claim 79, wherein the host transaction display includes presentation and identification display areas that provide the same information as contained in the presentation area and identification area of the community viewing display.

81. A program product as defined in claim 79, wherein the session host selects the information that is displayed in the presentation area of the host transaction display.

20           82. A program product as defined in claim 81, wherein the host transaction display includes an interaction display area that identifies all joined users and shows messages from individual users to the presentation session participants.

-45-

83. A program product as defined in claim 82, wherein the presentation area shows product information, and the interaction area of the host transaction display shows product purchases by the joined users.

5 84. A program product as defined in claim 70, wherein the community viewing display includes an interaction display area that identifies all joined users and shows messages from individual users to the presentation session participants.

85. A program product as defined in claim 84, wherein the community viewing display presentation area of a user's display shows product information, and the interaction area of the user's community viewing display shows product purchases by the user.

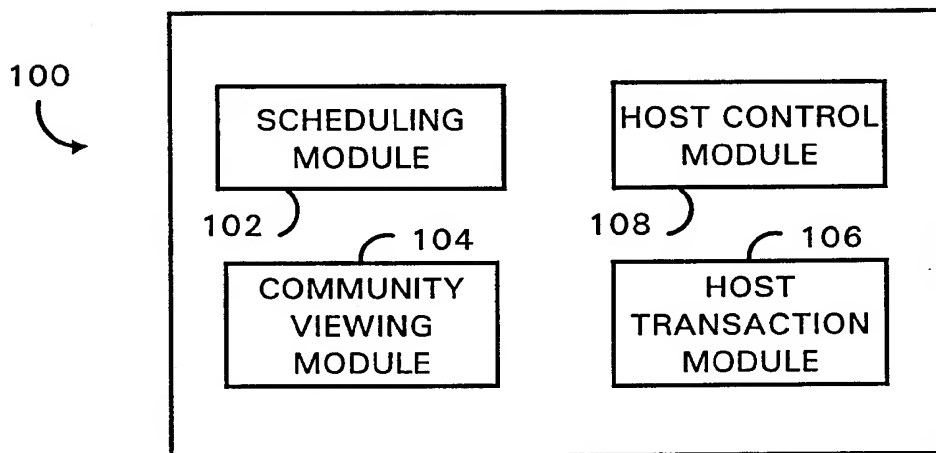
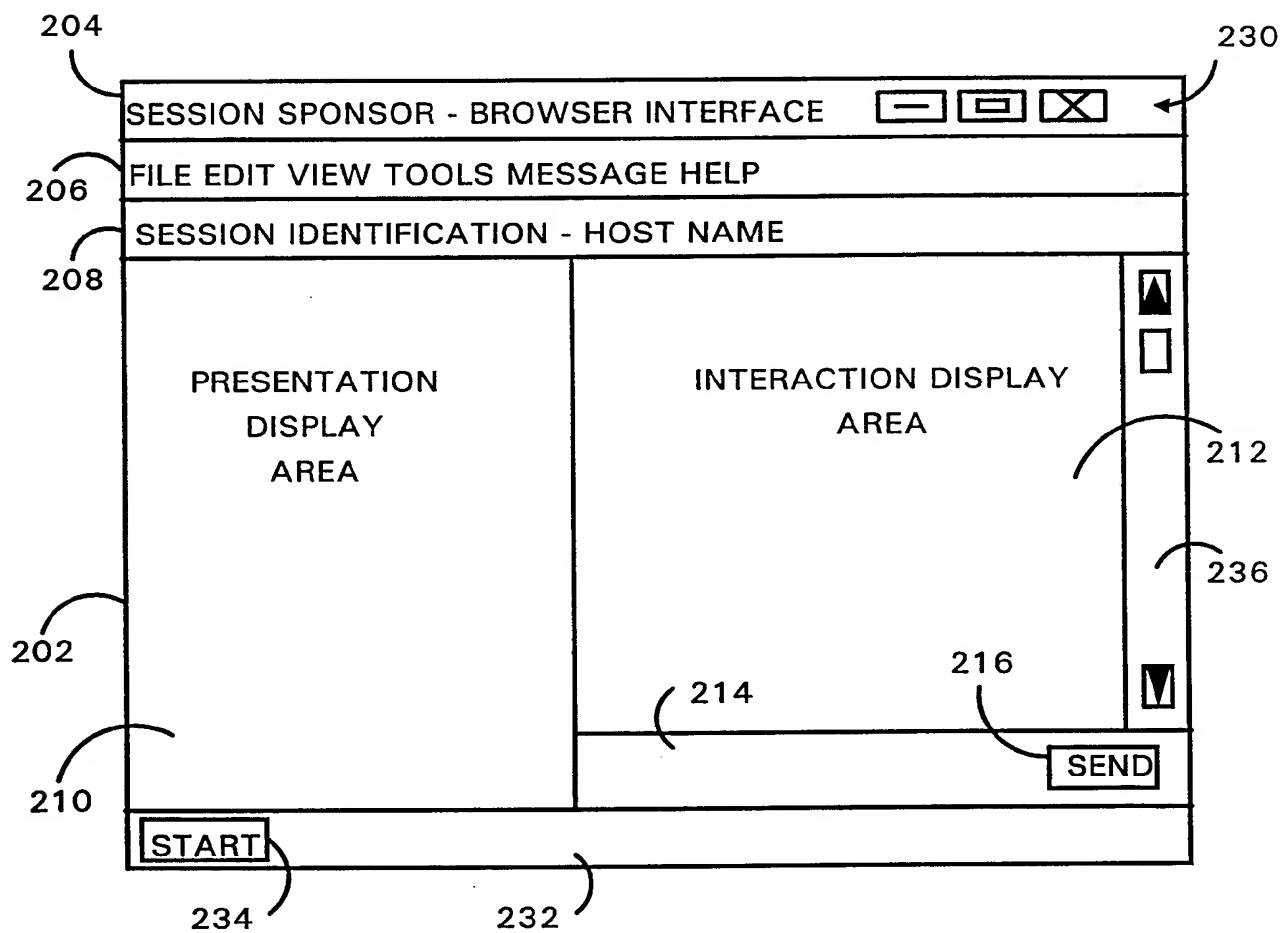


FIG. 1





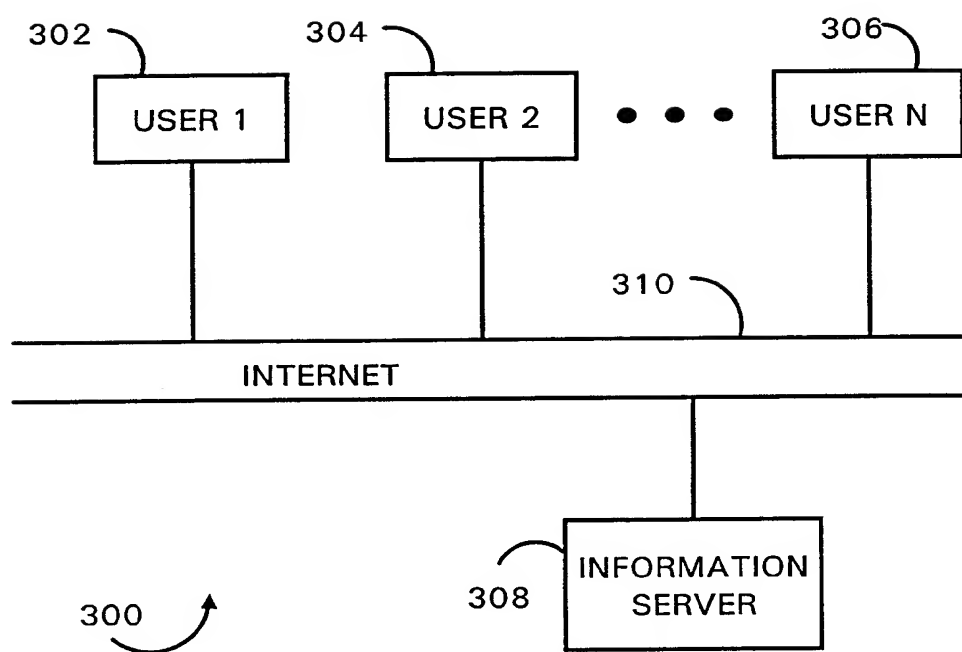


FIG. 3

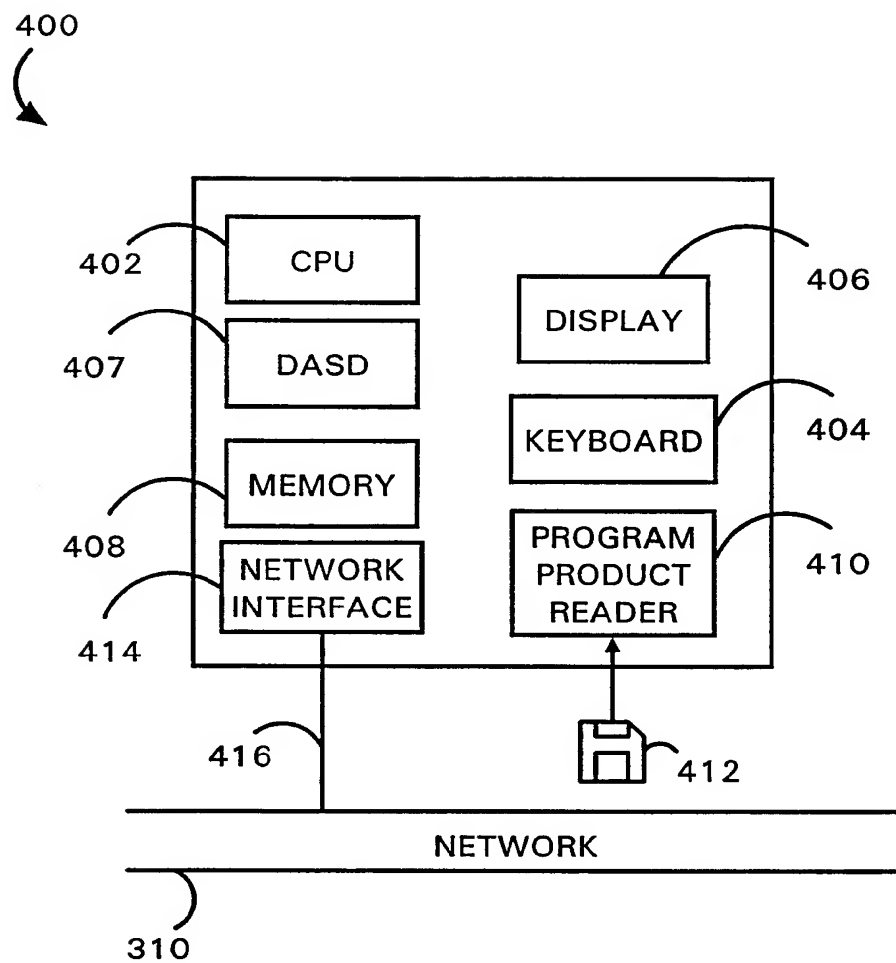


FIG. 4

SESSION SPONSOR - ABC CORP. SCHEDULING

FILE EDIT VIEW TOOLS MESSAGE HELP

MEMBER LOGIN

USER NAME

USER PASSWORD

BECOME A NEW MEMBER

ENTER AS MEMBER

ENTER AS GUEST

SIGN UP

SIGN UP

ENTER AS GUEST

SIGN UP

SESSION	SESSION NAME	TIME	DATE	HOST
BEGIN 1	INTRO TO EYES	1PM	7/1/99	MARY A
BEGIN 1	INTRO TO FACE	1PM	7/1/99	SARA V
BEGIN 1	INTRO TO HAIR	3PM	7/2/99	KIM T
TOPIC A	EYES	7PM	7/2/99	CAROL B
TOPIC A	HAIR	1PM	7/1/99	MARY A
ADVANCED 1	EYES	4PM	7/6/99	KAREN B

HOST INFORMATION AREA

BECOME A SESSION HOST

START

500

FIG. 5

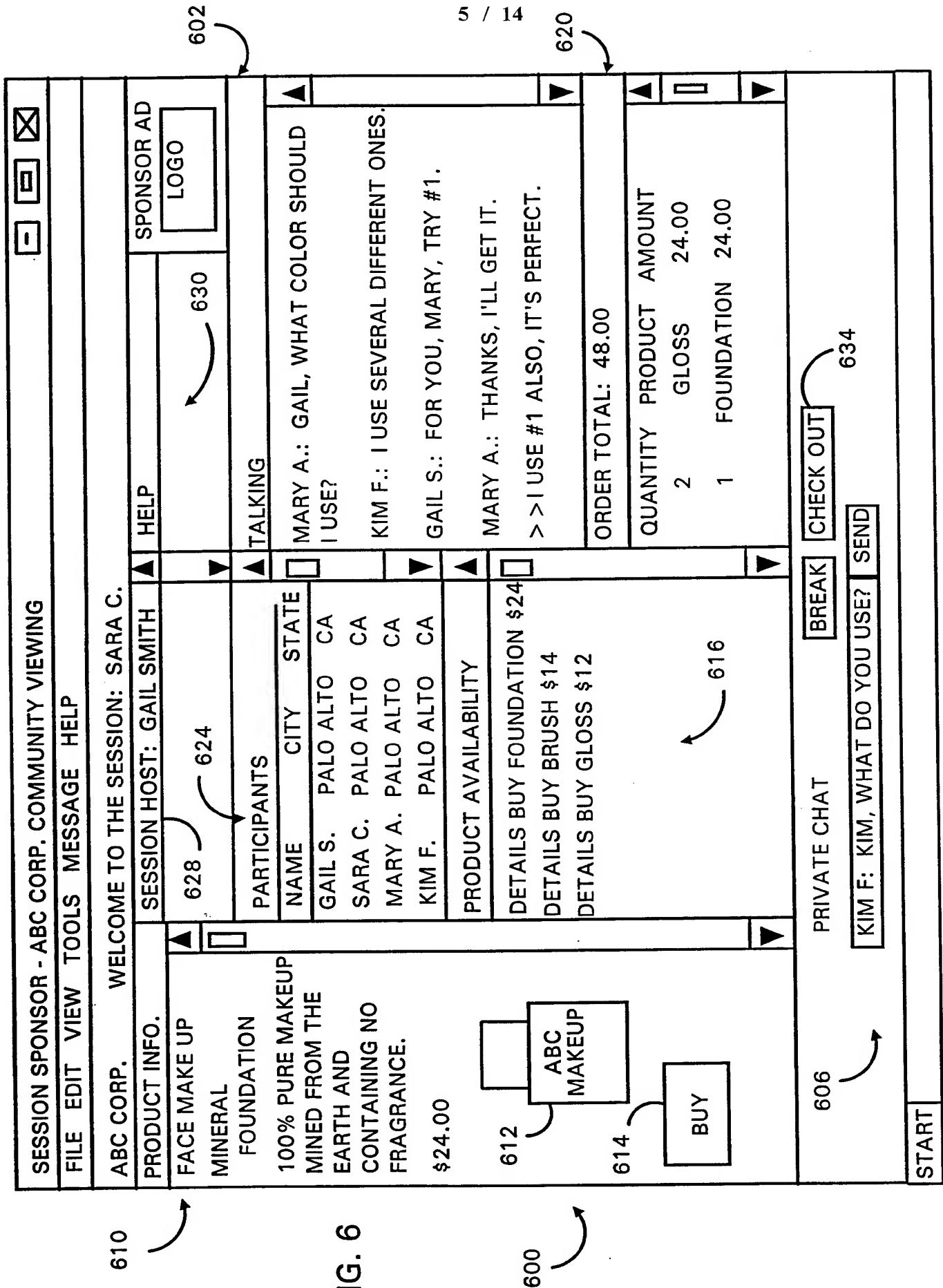


FIG. 6

SESSION SPONSOR - ABC CORP. HOST CONTROL

FILE

EDIT

VIEW

TOOLS

MESSAGE

HELP

HOST CONTROL MODULE

HOST LOGIN

USER NAME

USER PASSWORD

710

SESSION LIST

SESSION	SESSION NAME	TIME	DATE	HOST
BEGIN 1	INTRO TO EYES	1PM	7/1/99	MARY A
BEGIN 1	INTRO TO EYES	1PM	7/1/99	SARA V
BEGIN 1	INTRO TO HAIR	3PM	7/2/99	KIM T
TOPIC A	EYES	7PM	7/2/99	CAROL B
TOPIC A	HAIR	1PM	7/1/99	MARY A
ADVANCED 1	EYES	4PM	7/6/99	KAREN B

714

CREATE A NEW SESSION

MODIFY

MODIFY

MODIFY

MODIFY

MODIFY

MODIFY

720

HOST INFORMATION AREA

BECOME A SESSION HOST

702

704

START

FIG. 7

SESSION SPONSOR - ABC CORP. HOST TRANSACTION

☐ ☐ ☒

FILE EDIT VIEW TOOLS MESSAGE HELP

ABC CORP. SESSION HOST: SARA C.

PRODUCT INFO.

▲

FACE MAKE UP MINERAL FOUNDATION

100% PURE MAKEUP MINED FROM THE EARTH AND CONTAINING NO FRAGRANCE.

\$24.00

809

ABC MAKEUP

BUY

DROP USER

838

820

DROP

PARTICIPANTS

▲

NAME	CITY	STATE
GAIL S.	PALO ALTO	CA
SARA C.	PALO ALTO	CA
MARY A.	PALO ALTO	CA
KIM F.	PALO ALTO	CA

PRODUCT AVAILABILITY

▲

DETAILS SHOW FOUNDATION \$24

DETAILS SHOW BRUSH \$14

DETAILS SHOW GLOSS \$12

TALKING

▲

MARY A.: GAIL, WHAT COLOR SHOULD I USE?

KIM F.: I USE SEVERAL DIFFERENT ONES.

> > FOR YOU, MARY, TRY #1.

MARY A.: THANKS, I'LL GET IT.

SARA C: I USE #1 ALSO, IT'S PERFECT.

GROUP TOTAL: \$363.00

▼

SARA C. \$48.00 DETAILS

MARY A. \$63.00 DETAILS

PRIVATE CHAT

824

BREAK

CHECK OUT

SEND

START

828

FIG. 8

8 / 14

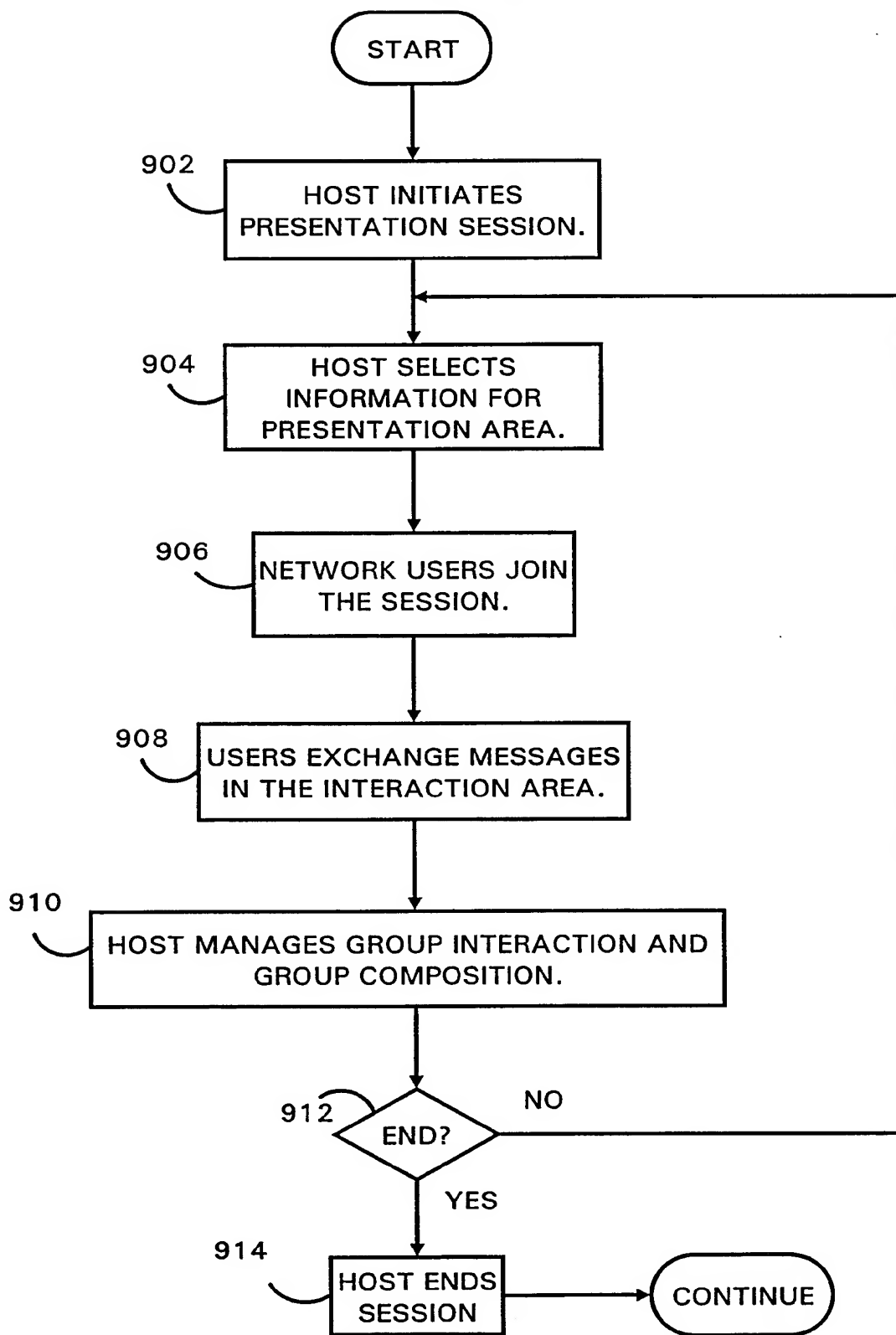


FIG. 9

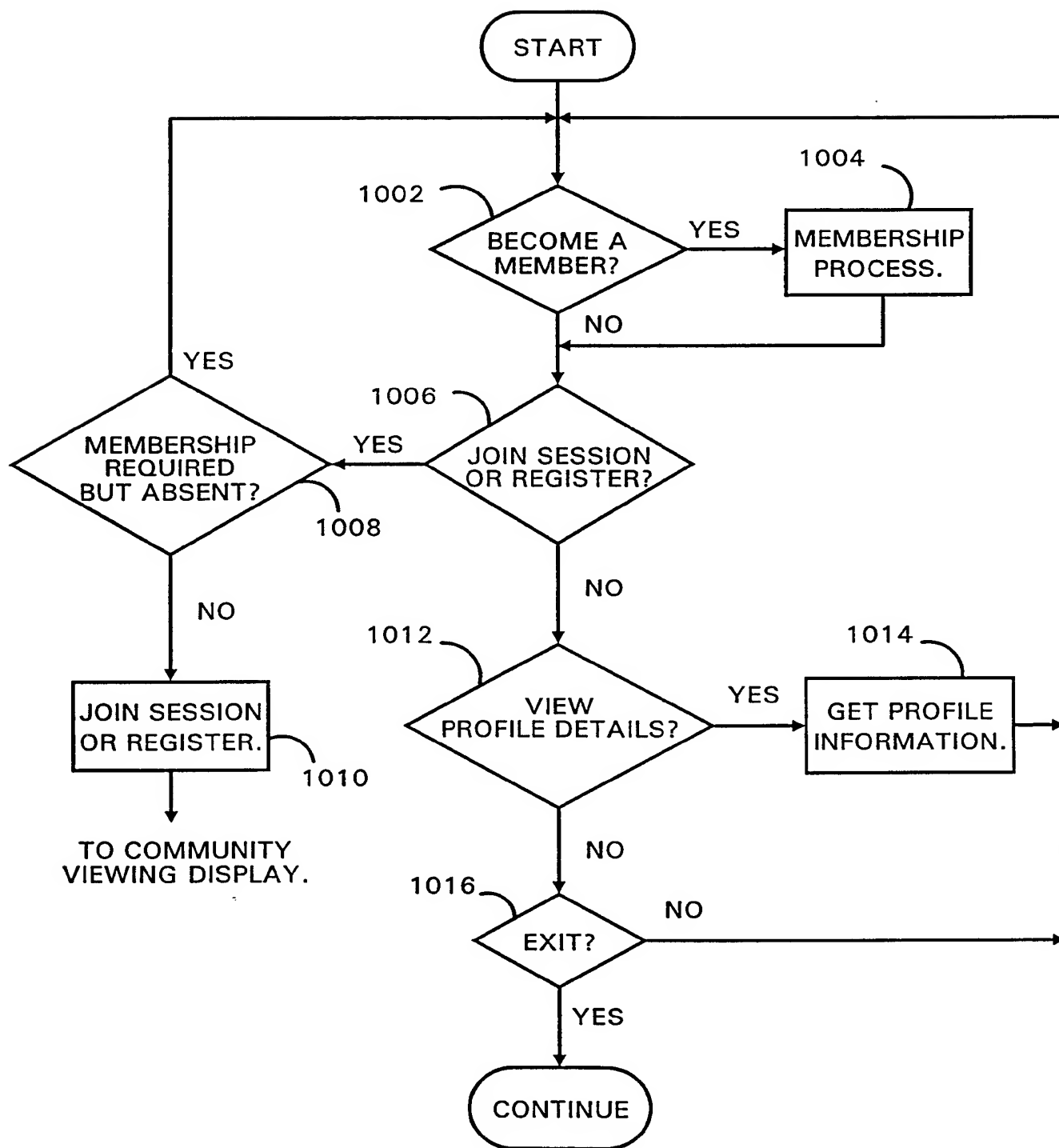


FIG. 10



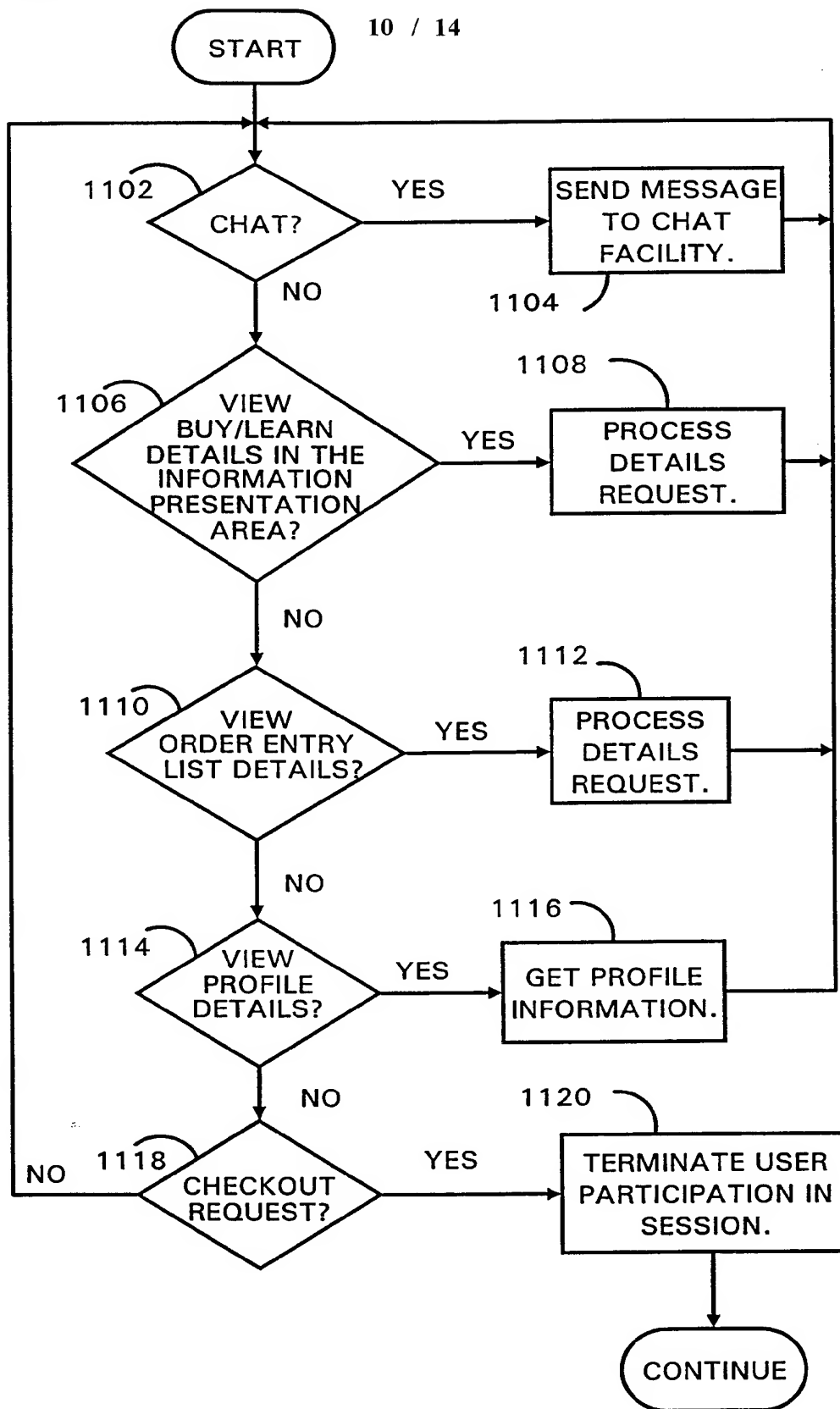


FIG. 11

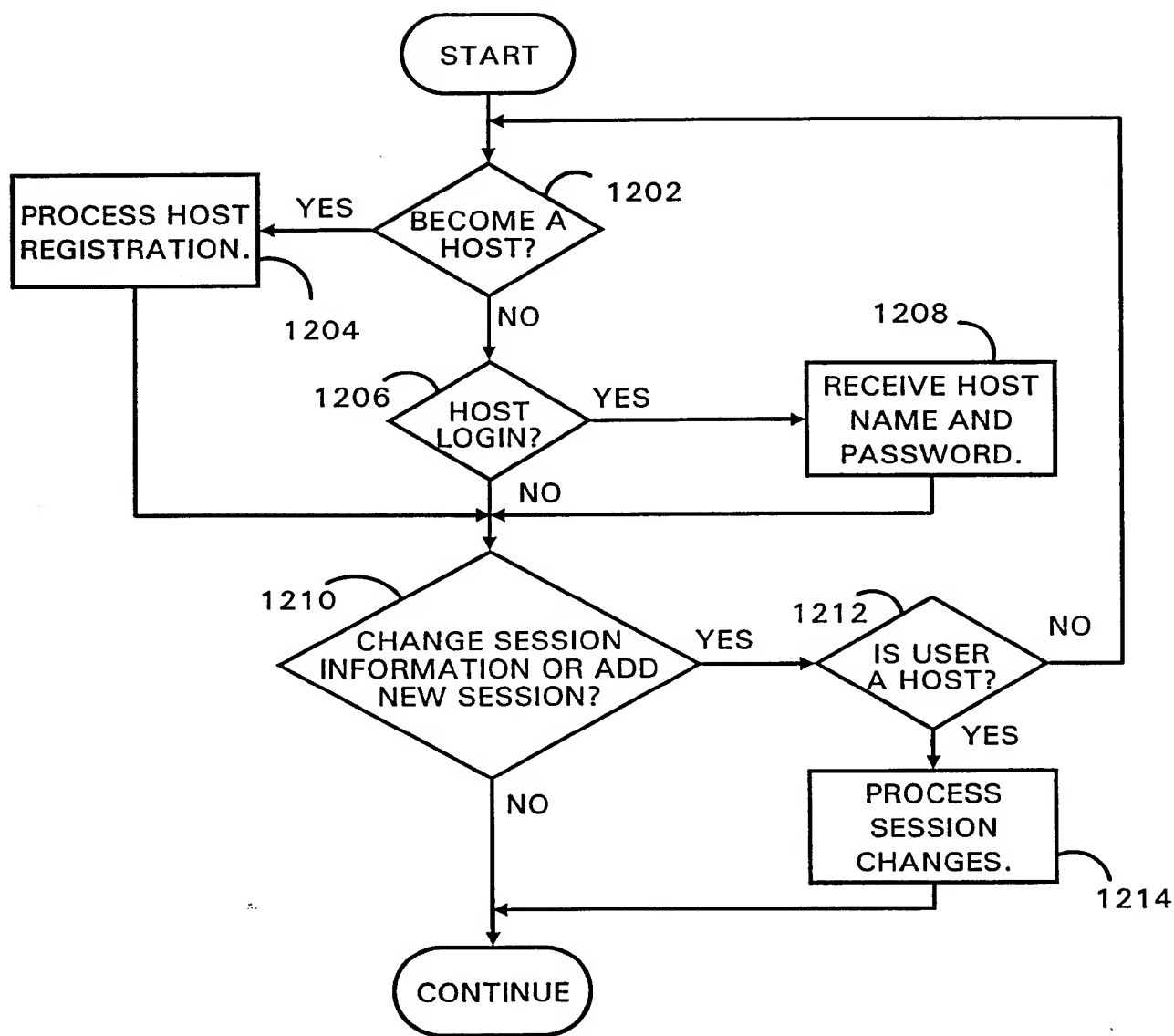
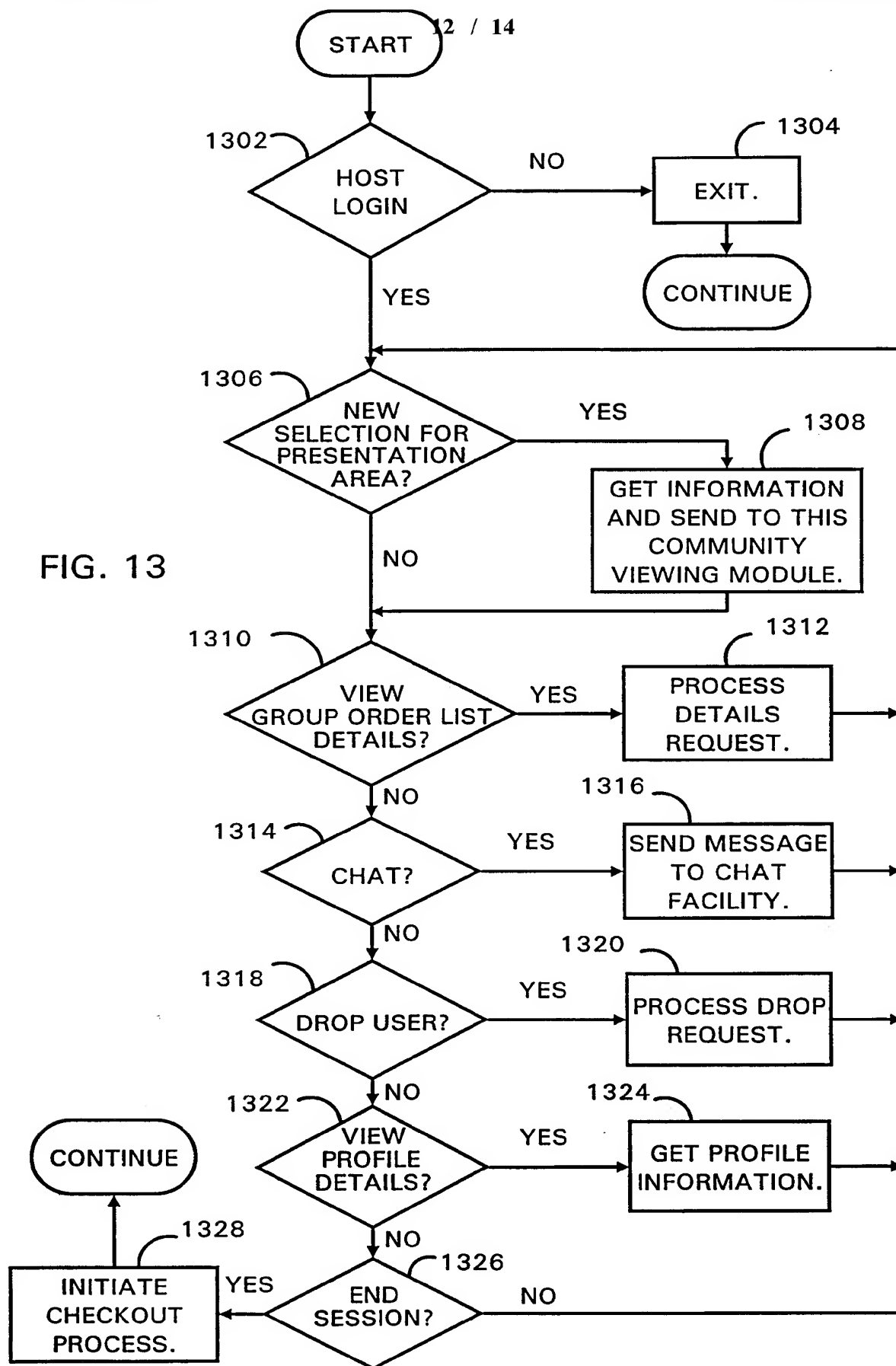


FIG. 12



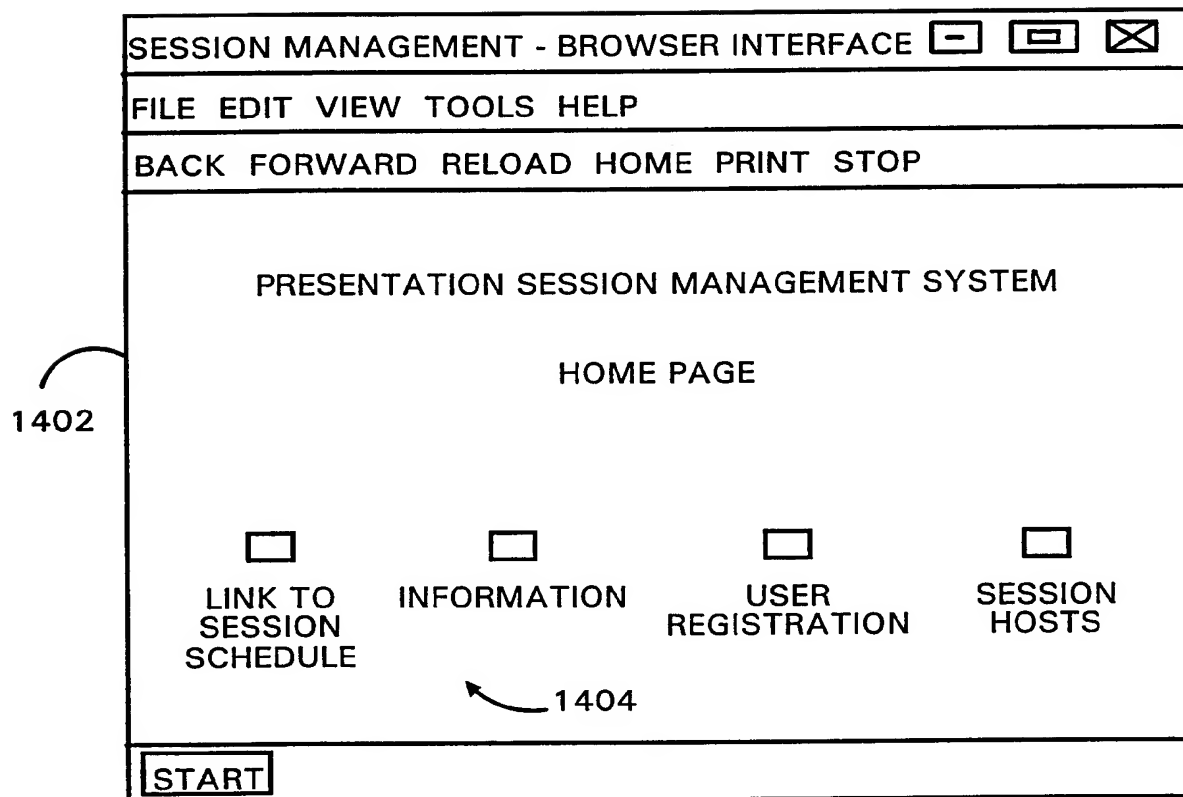


FIG. 14

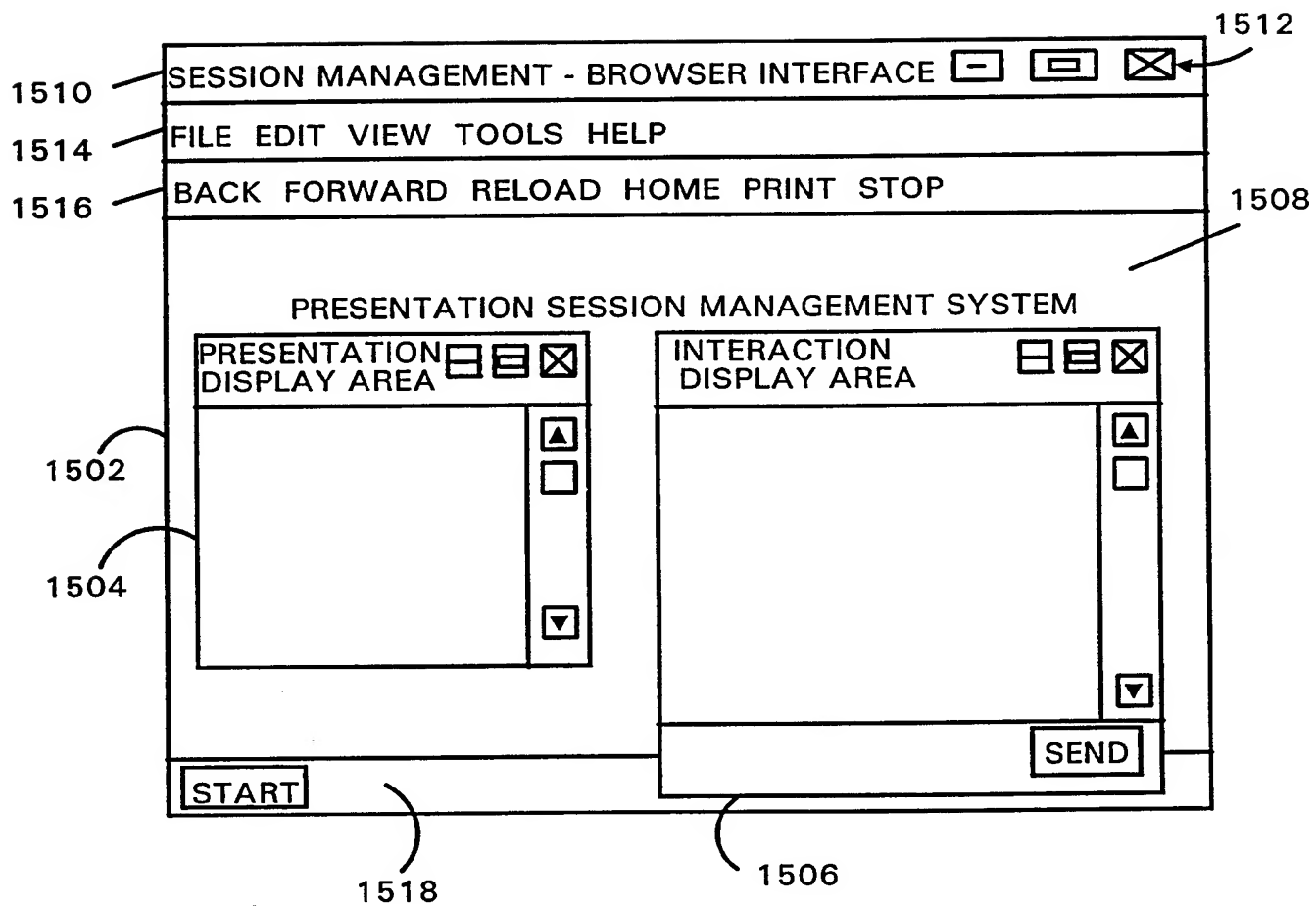


FIG. 15

# INTERNATIONAL SEARCH REPORT

Internal Application No  
PCT/US 00/20286

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 H04L12/18 G06F17/60

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 H04L G06F G09B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC, COMPENDEX, IBM-TDB

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 97 37484 A (NORTHERN TELECOM LIMITED) 9 October 1997 (1997-10-09)	1-5, 7-13,15, 20-24, 26-32, 34, 39-54, 56-68, 70-74, 76-82,84
Y	page 5, line 26 -page 7, line 13 page 14, line 9 -page 23, line 10	6,14, 16-19, 25,33, 35-38, 55,69, 75,83,85
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*&\* document member of the same patent family

Date of the actual completion of the international search

22 November 2000

Date of mailing of the international search report

29/11/2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Ströbeck, A.

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 00/20286

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5 794 219 A (BROWN STEPHEN J) 11 August 1998 (1998-08-11)	6,14, 16-19, 25,33, 35-38, 55,69, 75,83,85
A	<p>column 6, line 26 -column 8, line 59 -----</p> <p>KAZUO WATABE ET AL: "MULTIMEDIA DESKTOP CONFERENCING SYSTEM: MERMAID" NEC RESEARCH AND DEVELOPMENT,JP,NIPPON ELECTRIC LTD. TOKYO, vol. 32, no. 1, 1991, pages 158-167, XP000229431 ISSN: 0547-051X page 160, right-hand column, line 32 -page 162, right-hand column, line 37 -----</p>	1,2,12, 21,31, 41,57, 71,81

# INTERNATIONAL SEARCH REPORT

information on patent family members

International Application No

PCT/US 00/20286

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9737484 A	09-10-1997	CA 2221702 A EP 0829160 A JP 11506595 T	09-10-1997 18-03-1998 08-06-1999
US 5794219 A	11-08-1998	US 6023686 A	08-02-2000